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BALTIMORE, NOVEMBER 30, 1894.

THE MANUFACTURERS' RECORD recently asked several leading republicans if there is any danger of the republican party attempting to revive the force bill or any other measure that could, with or without reason, be regarded as inimicable to the South. Hon. J. H. Walker, member of Congress from Massachusetts, the senior republican member of the committee on banking and currency, who is likely to be chairman of this committee in the next House, replies to this inquiry through this week's issue. Mr. Walker criticises both democrats and republicans; claims that there is no likelihood of the republican party ever attempting to pass any bill such as the Lodge force bill, and states that the feeling of the country, both North and South, is that all unfair election methods, wherever found, must end, but that this must be accomplished by the local authorities. A revival of any bill that, whether so intended or not, would be regarded as a fight against the South would prove injurious to the development of that section, and hence it is gratifying to learn from Congressman Walker's letter that all fear of this may be entirely dismissed.

GEN. J. W. BURKE, receiver of the Chattanooga Southern Railroad, in an interview published in Chattanooga, states that he has had a number of inquiries in regard to bauxite property in Alabama to be used for the manufacture of aluminum. General Burke controls large bodies of very fine bauxite adjacent to the town of Jacksonville, Ala.

THE Nicaragua Canal Co., which has been organized to succeed the Nicaragua Construction Co., has been incorporated in Vermont. The incorporators of the new company are John R. Bartlett, Smith M. Weed, Henry E. Howland, Richard L. Edwards, John J. Emory, Will Helmus Minderse and E. K. Sibley.

THE government will be asked for an appropriation of \$200,000 for Tennessee's Centennial Exposition, and to provide a \$50,000 building in addition.

To Hold a Nicaragua Canal Mass-Meeting.

Some weeks ago the MANUFACTURERS' RECORD editorially urged the desirability of mass-meetings being held throughout the country in the interest of the Nicaragua Canal. It was suggested that all business organizations, especially those in the South, should hold public meetings to urge upon Congress the importance of prompt action looking to the building of this canal. The Corn and Flour Exchange of this city, in carrying out this idea, issued an invitation to every other trade association in the city inviting a conference upon this question. A preliminary meeting was held on last Monday, when it was decided that a general meeting should be held under the auspices of all the trade organizations in the city for the purpose of impressing upon Congress the desirability of prompt action. What Baltimore is doing should be done throughout the entire country, but especially should the South, which is so vitally interested in the construction of this canal, move vigorously in this matter. In every town in the South action such as the business organizations of Baltimore have decided on should be taken.

Immigration Increases Values.

In ten years the assessed value of property in the parish of Calcasieu, La., has increased from \$1,500,000 to \$7,500,000. At a recent meeting of citizens it was stated that this increase was due almost entirely to immigration from the West. The capital brought by these people and the result of their labors brought about this remarkable increase.

What has been done in Calcasieu parish by an influx of outside people is simply an illustration of what can be accomplished throughout the entire South by the same thing. The coming in of new people, not only bringing some wealth with them, but bringing new energy and new activity, immediately adds to the value of all land, develops new lines of business, makes it possible to have better roads, better schools, more social facilities, and in every way is of an advantage to a rural community. Every man in the South owes it to himself, to his family, to his community and to his State to do all in his power to attract settlers to his section. In doing this he is adding to his own prosperity; he is helping to develop his country to such a point as to give greater opportunities to the rising generation than they can possibly have in a sparsely-settled region. In helping to bring in outside people he is helping to increase the prosperity of the community, and in every way advancing the best interests of his family and of his neighbors. It

is the duty of every man in the South to work to attract settlers.

What the South Is Doing in Diversifying Its Agriculture.

In the New York Tribune of last Friday, in discussing the low prices now prevailing for wheat and cotton, a very dismal picture of the condition of Southern planters was drawn. After stating that the prospect for the cotton-planters appears to be rather darker and more dismal than that of the wheat-growers, it was said:

Moreover, the cotton-planter can't eat any of his cotton and can't feed it to animals, while the Western wheat-grower can consume a part of the wheat which he produces, and feed a part, at least, of it to hogs and other animals.

The writer of the Tribune article is laboring under a misapprehension that seems to very generally prevail throughout the North. Apparently he is of the opinion that the Southern farmer raises little but cotton, and as the price for that is low, his financial condition is very distressing. But there is no such condition of financial distress as the Tribune article would indicate. For some years the South has been learning to return to the condition of agriculture prevailing before the war, and raise its own foodstuffs, with cotton as a surplus crop, as it did then to a large extent. Last year the South raised a large corn crop. The low price of cotton and the general financial stringency forced Southern farmers to produce their cotton on a very economical basis. Less money was borrowed on advanced mortgages than in any year since the war up to that time. With almost enough corn and bacon to carry them through last spring, with comparatively little money borrowed in advance on cotton, the Southern farmer produced his 1894 crops at a lower cost and with less debt than in any year since 1860. His cotton crop, in fact, was nearer to a surplus money crop than since that date.

The world has heard so much about Southern cotton that probably few people realize the fact that the corn crop of the South of 1894 is worth about as much as the cotton crop, and that the total value of the South's cotton crop now annually averages less than one-third of the aggregate value of all Southern farm products. The fact is, the increased production of grain and other crops for 1894 counterbalances the decrease in cotton due to low prices. The Western farmer, when his wheat or his corn has failed him or when prices are low, has but little to fall back upon; but the Southern farmer has a diversity unequalled elsewhere. This is contrary to the general understanding of Southern agricultural conditions, but any careful investigation will prove its correctness.

In 1893 the fourteen Southern States produced 435,745,000 bushels of corn. The advance reports of the Agricultural

Department show that the yield for 1894 was 483,422,000 bushels, although the actual facts of the case are that the output of Southern corn was larger this year than these statistics show. In other words, the corn crop was so much better than usual that it is quite certain that the Agricultural Department did not fully cover the increase. But even accepting these figures, here is a gain in the South of 48,000,000 bushels of corn, and as the average price in that section is over fifty cents a bushel, here is an increase added to last year's corn crop of \$24,000,000, without considering the increase in value of corn over the increase in value last year. The central cotton belt region shows an increase in production of corn of 3,000,000 bushels in North Carolina, 6,200,000 bushels in South Carolina, or a gain in that State of 50 per cent.; 1,500,000 bushels in Georgia, 6,000,000 bushels in Alabama and 10,000,000 bushels in Mississippi. Contrast this increase in grain production with the great increase in the West, and the strength of the South's agricultural position is seen. In Iowa, the great corn-producing State and the State in which corn is so essential to prosperity, the average yield for 1894, as given by the November report of the Agricultural Department, was fifteen bushels per acre; in Kansas the average was 11.2 bushels; in Nebraska, 6 bushels; in South Dakota, 4.2 bushels; while the average for the entire South, from Maryland to Texas, was 16.9 bushels per acre.

In order to confirm the statement made that Southern agricultural prosperity does not depend upon cotton to the extent that it is generally supposed, and that the value of the cotton crop is only about one-third or less of the value of Southern agricultural products, a few statistics bearing on these points may be of interest.

The general output of farm products in the South in 1894 was greater than in 1893, all crops in that section with rare exceptions having been very abundant, but is impossible as yet to get all the returns of this year's crops, and so the statistics for the crops of 1893 will answer. In that year the South produced 53,000,000 bushels of wheat valued at \$34,700,000, 85,800,000 bushels of oats valued at \$34,900,000, and added to the value of rye and barley, of which small amounts were produced, and the value of the corn crop based on this year's yield, would give a total of over \$320,000,000 as the value of the South's grain crops, which exceeds the value of the cotton crop. Of the total production in the entire country of tobacco in 1893 of 483,000,000 pounds, worth \$39,000,000, 376,799,000 pounds, valued at \$28,356,000, were produced in the Southern States. Of potatoes the yield in the South was 19,385,000 bushels, valued at \$12,237,000. The South is not generally credited with

being a hay-producing country, and yet in 1893 its yield of hay was 5,418,000 tons, worth \$61,767,000; but in this connection it should be stated that it is generally customary in the South for cattle to graze during much of the year, and consequently the hay is not cut and the value ascertained as closely as in the North. In reality, therefore, the value of the grass crop of the South was far beyond the \$61,000,000 reported.

Throughout the South there is a steady increase in diversified agriculture—an increase which is making the Southern farmer less and less dependent upon cotton, and is not only enriching the farmer, but is steadily furnishing a better foundation for all the business interests of the South that are dependent upon agriculture. The increase of rice cultivation is revolutionizing much of the State of Louisiana, and bringing to the rice farmers of that State greater profits than are made by any cereal growers of the country. Fruit-growing and truck-raising are making gigantic strides, and from South Georgia alone over 10,000 carloads of watermelons are annually shipped to the North and West. Within the last four or five years over 1,000,000 peach trees have been set out in South Georgia, while in parts of that State, in Carolina and elsewhere grape-growing is making great progress. The bulletin of the United States census, giving the yield of fruit in the census year 1890, shows that of a total production of 36,367,000 bushels of peaches in the entire country, 27,793,000 bushels were produced in the South, 26,900,000 bushels being south of Maryland. In that year the State of Georgia led with a production of 5,525,000 bushels of peaches, while Arkansas had 3,000,000 bushels and North Carolina 2,700,000 bushels. The total crop of apples for the country in 1890 was 143,100,000 bushels, and nearly one-third, or 46,947,000 bushels, were produced south of Mason and Dixon's line.

Turning to the smaller things, it is found that in 1880 the South had 27,400,000 barnyard fowls, and in 1890 89,585,000. The production of eggs rose from 100,474,000 dozen in 1880 to 184,344,000 dozen in 1890. In dairy products the increase was even more remarkable. In 1880 the South made 120,600,000 pounds of butter, and in 1890 211,000,000 pounds. The returns of milk production for the entire country in 1880 were evidently deficient, every State reporting but a comparatively small amount of milk. The entire South reported for that year 13,900,000 gallons. In 1890 there was a tremendous gain reported throughout the entire country—the reports of this year having been more complete than in 1880—but the actual gain in the South was something remarkable, and the figures reported were 838,718,000 gallons.

A study of these figures will show that the South is diversifying its farm interests. Cotton at five and six cents does not mean bankruptcy to Southern farmers; it simply means that cotton-raisers will have a little less money to spend than they would have had at higher prices, and that they will economize until prices advance. These low prices, however, will emphasize, just as the low prices of two years ago did, the necessity of Southern farmers giving more and more attention to raising diversified products and living at home, instead of buying

corn and bacon in the West, as they had done for so many years. High prices for cotton would have caused a return to the all-cotton system, and in a year or two the Southern farmer would again have been giving his time mainly to cotton instead of to diversified agriculture. What the raising of home supplies means to Southern farmers, to the South at large and to Southern railroads in the matter of transportation may be illustrated in the case of one small town in Georgia, which is but a sample of hundreds of others. Up to three years ago this little town of about 1000 inhabitants had annually handled an average of \$100,000 of Western bacon and corn, sold by the merchants to local cotton-raisers. Two years ago there was a most noticeable decrease in the amount of Western produce brought in. Last year less than eight carloads were sold, and this year it is more than likely that that town will ship grain and bacon to other points. This changed condition has been going on all the way from Carolina to Texas. To that is due much of the decrease seen during the last two years in the volume of Southern railroad freights, but, while this decrease temporarily lessened the earnings of Southern railroads, it means an enormous improvement in the financial condition of the people, which must from this time on steadily react in favor of the railroads. The condition of the Western farmer, as depicted in the Tribune, may be correct, and that section may have before it, as the writer of the article indicated, great depression, but the South is on solid ground. Its future is brighter than ever before.

A Large Purchase of Georgia Lands.

Here is an illustration of what the *Southern States* magazine is doing in the way of getting people and money into the South.

About two months ago Messrs. Kennedy & Ballard, real-estate dealers, Chicago, Ill., wrote to the editor of the *Southern States* for copies of the magazine, and asked, besides, for information about peach-growing in Georgia. After having read the information that was furnished and the copies of the magazine that were sent, they wrote as follows:

It is now the intention for one of the members of this firm to visit Macon, Ga., and the surrounding territory with a view to taking hold of a large tract of land for colonization purposes.

As a sequel to this, there comes now an announcement that, after two or three weeks spent in investigation, they have bought 20,000 to 40,000 acres of land near Macon to be colonized and devoted to fruit-growing. The moral is plain: Advertise in the *Southern States* magazine, published by the Manufacturers' Record Publishing Co.

A Good Idea.

What is known as the Farmers and Merchants' Co-operative Association has been formed in Hale county, Ala., with J. W. Pollard, president, and R. A. White, secretary. The object of the association is to encourage and promote the raising at home of everything the farmers and people generally need. This kind of a society might be formed in many other sections and be of great advantage.

One Way to Attract Attention.

The Baltimore Centennial Association, the organization formed for the purpose of holding a great international exposition in Baltimore in 1897, has gotten up a special envelope for the use of business men of the city in their correspondence. This envelope is furnished at cost to all business houses that desire it. On the back of it is a brief summary of some of the strong points of Baltimore, and some statistics regarding the growth of the city. In this summary it is stated that the population of the city is nearly 600,000, the increase during the last four years having been 100,000; that there are 275 miles of electric and cable street lines; that 100,000 people are employed in factories, whose wages aggregate \$42,000,000 a year; that the savings banks of the city have \$41,000,000 on deposit; that there are twenty lines of ocean steamers to European ports, and other facts of interest. The wide distribution of this envelope, containing facts of this kind, must necessarily prove of great value in attracting attention to the city of Baltimore. The world at large knows comparatively little of the rapid progress of this city, which is probably growing more solidly and more rapidly in proportion to population than any other city in the United States. What Baltimore is doing in the way of advertising might be done by every town and city in the South.

All Signs Point South.

Mr. John S. Wilson, of James Stewart & Co., St. Louis, the contractors who are putting up the 50,000-spindle mill at Pelzer, S. C., is very enthusiastic as to the rapidity of the future progress of the South. In an interview Mr. Wilson says:

If the times continue to improve you will see a great movement in this line. The wonderful possibilities of the South are just becoming known, or rather recognized. The people in our country have believed all along that the resources down here were a figment of the "boomers," but the depression in the North and West for the last two or three years has caused them to investigate more closely, and the result will be a great tide of immigration and capital to nearly all the Southern States.

In the last issue of the MANUFACTURERS' RECORD particulars were given of the contract secured by an Alabama firm of 10,000 tons of iron pipe to be shipped to Tokio, Japan, provided the details regarding settlements could be agreed upon. Reports now come that the Anniston Pipe & Foundry Co. has made a sale of \$100,000 worth of iron pipe, to be shipped to the city of Honolulu, with some prospect of this order being doubled. Thus the South is pressing its iron business upon the world and meeting the world in competition.

Southern Railway Securities.

The MANUFACTURERS' RECORD is enabled upon the best authority to confirm the report that a large amount of Southern Railway securities have been sent to England, where they will be listed in the London market. While it is impossible to obtain the exact figures at which they sold, there is reason to suppose that the bonds were taken at between 87 and 88. They were underwritten by the guaranteeing syndicate at 85. The sale includes bonds and preferred and common stock. The amount is variously stated at from \$10,000,000 to \$20,000,000 worth. This sale must prove of great value to the South.

NO MORE FORCE BILL.

A Republican Criticism of Democrats and Republicans.

WORCESTER, MASS., November 16.
Editor Manufacturers' Record:

The democrats never made a more egregious blunder than the one they made in the Fifty-third Congress in repealing all national election laws. It exceeded the great blunder of the republican party in the Fifty-first Congress in not setting its foot solidly down upon the Lodge elections bill. The two parties were similarly situated in the two Congresses—the calm-headed, wise leaders of the republican party in the Fifty-first Congress in the direction of the Lodge bill. The leaders of the democratic party had so persistently and continually misrepresented the purposes of the republican party, and were enabled to do so because the election laws were on the statute book, the repeal of which they could see no way of defeating, and therefore the democrats repealed those laws. The democrats have thus lost the club wherewith they beat into subjection the rising independent political action of the South upon economic questions.

I claim there is no republican in Congress who knows any more thoroughly than I do the sentiment of the republican party in this country upon this question. There will not be three men in the Fifty-fourth Congress (and I do not believe there will be one) who will any sooner propose to enact any kind of a national election law than they would propose to put the national troops at the points in the Southern States from which they were removed by President Hayes in 1877. The feeling at the North is precisely the same as that revealed by the leading newspapers at the South of the questions of elections, viz., that cheating at the polls by any party must end now and forever, but it must be accomplished by the local authorities. Furthermore, the determination among Northern republicans is as strong as among the honest democrats of the South in favor of absolute home-rule in all matters whatsoever, excepting those plainly designated in the Constitution as requiring national legislation. Every sensible man North and South, and as fully in the republican party as in the democratic party, is today of the opinion that any attempt at interference with elections anywhere by the national government furnishes not only the excuse, but the means, through its machinery, of defeating the will of the people at every point where the power of the national government is called into requisition, whether it is called in really, or only ostensibly, to secure honest voting and honest counting. Let the well-wishers for their States and country in every Southern locality dismiss from their minds any idea that any further attempt will be made by Congress in this generation or the next to re-enact any national election law whatever. Were anyone of the opinion that such laws would be efficient previous to the recent elections, certainly the results of that election would dissipate any such view. Let the patriotic men of the South fearlessly divide on economic questions, as it is their duty to do in their respective States.

It is the teaching of history, with rare exceptions, and only for exceedingly brief periods, that the integrity, wealth and intelligence of every community will rule it, however evenly divided the men of integrity, wealth and intelligence may be between the two great contending parties that always exist in every locality under a free government. However large a majority the black men may have in any locality, they never will rule in that locality until their integrity, wealth and intelligence exceeds that of the white man. Let every Southern man from now forward

dismiss any apprehension whatever of any successful, or even attempted, interference by the national government with the election machinery of his locality.

You are entirely right in hinting at the existence of the facts and conditions in the republican party which this letter more fully discloses.

J. H. WALKER.

SOUTH AMERICAN INDUSTRIAL CONDITIONS.

The Industrial Attractions of the Great State of Brazil—Very Little Comparatively Done, but a Rich Missionary Ground for Manufactures.

II.

BAHIA, BRAZIL, November 2.

Editor Manufacturers' Record:

Two points has our ship made in Brazil, Pernambuco and Bahia, the former with 150,000 and the latter with 180,000 population, both capitals of very rich states. Both cities do large foreign business, but their states do not have much manufacturing.

Pernambuco is sometimes called the "Venice of America," because of a canal running through it. It has a remarkable harbor, with a long, straight reef running through it. Its principal exports are sugar, cotton, fruits and cocoanuts. It exports 150,000 tons of sugar and over 300,000 bales of cotton.

The state of Bahia could, if tilled, supply the world with sugar. It has eight harbors with twenty feet depth. Its chief products are sugar, tobacco, cotton, coffee and cocoa. Its tobacco is largely exported to Europe for manufactures. It should have factories of its own.

Brazil is not a manufacturing state yet, but it has every element and condition for manufacturing in every kind of raw material, and unlimited water-power.

Probably the southern state of Rio Grande do Sul has the greatest variety of industries, due to the German colonies settled in it. It has good coal mines being worked, and it makes and ships a good deal of dried and jerked beef and flour, and considerable wine is made there. It has manufactories of many kinds, sugar mills, distilleries, tanneries, oil presses, saw mills, factories of cloths, fire-arms, iron, hats, etc., and it makes some excellent cassimeres of merino wool, which are sold in Rio Janeiro. The German colonists make these articles for their own use.

The leading manufacture of Brazil is of cotton. In 1888 there were ninety cotton mills. One of the chief cotton-manufacturing states is the rich commonwealth of Minas-Geraes, which has great cotton factories supplied with the best machinery from both the United States and Europe. This state is rich in vast mines of iron, good mines of gold, and fine butter and cheese are made. The iron lies in great beds right on the surface, and in mountains several hundred feet high, and there are furnaces in operation that yield 3000 tons a year, which is made into shovels, nails, picks, drills, horse-shoes, hoe, etc., for domestic use. Another state that has fine iron is Sao Paulo, whose iron ore is equal to the famous ore of Norway, and two furnaces are worked by the government near Saracaba, and 67 per cent. of metal is obtained from this ore. Large mines of itaberrite are found in Goyaz. Hematite in great quantities is also to be found in the state of Santa Katharina, right close to an harbor where the water will admit vessels of the largest draught.

Copper can be found in the states of Ceara, Matto-Grosso, Minas Geraes and Rio Grande do Sul, and in the first is being worked. This copper ore yields 40 per cent. Sao Paulo, Rio Grande do Sul and Minas-Geraes have lead, and marble is being worked in the first two. This marble is most excellent, in that it defies the climate, which spoils the European

marble, is plentiful, of many colors and is found very widely.

Gold and diamonds are said to be found in every state in Brazil. Kaolin to make fine porcelain is found in the state of Rio del Norte and in Santa Karina, and in the latter there are large coal deposits, and among its products are cotton, wine and silk, the latter of which is largely raised, for whose manufacture a factory is now under consideration.

The woods for manufacture are many, and found everywhere nearly. In the state of Espirito Santo there is a wood like rose-wood, only corded by golden fibres, called tapicura, that was shown at the Philadelphia fair in 1876. The state of Parana makes and sells abroad furniture and cabinet work. The state of Sergipe has rose-wood and the celebrated yellow wood called Vinhaticos, for cabinet-making, and the Tapinham wood, used for ships and barrels. Sergipe makes whale and castor oil, too.

The state of Para has a few industries, but has every condition for many. Minas-Geraes that wonderfully affluent state, has graphite, saltpeter and leadstone. The fact is that Minas-Geraes is probably the richest endowed state in the republic of Brazil. The state of Goyaz furnishes the famous "Brazilian pebbles" in abundance, the blessing of the blind, and nature's raw material for spectacles and lenses, and, curiously enough, they are encrusted with iron oxide.

I have alluded to Brazil's water-power. It is illimitable, but little used, mainly running the woolen factories of Parana and Rio Grande do Sul and the cotton mills of Sao Paulo and Minas-Geraes.

Brazil invites industries, with overmastering inducements of every kind.

I. W. AVERY.

The Nicaragua Canal.

[Richmond Dispatch.]

The present democratic administration, about to pass for a season, short or long, with the control of affairs, can make no greater gift to the South, to the United States and to the world, nor rear a greater monument to their honor, than by proper legislation to ensure the early completion of the canal across the Isthmus of Darien. That will open to the South the markets of China and Japan for its cotton, the western shore of North and South America for its coal and iron, and to the whole country the trade of the Pacific countries—and the empire of the world.

The opportunity is theirs. If they neglect it, the republicans will have the honor of the great work; the democrats all the dishonor of neglecting and hindering it. It is the tide in affairs that may save and restore the party. Neglected, it will bury the party and make its name a monumental mockery.

Greatest Issue Before American People

Mr. J. C. Keith, of Anniston, Ala., in a letter to the *MANUFACTURERS' RECORD*, says: "I would suggest, if it is not too late, that every city in the Union be earnestly requested to adopt resolutions urging Congress to pass a bill providing a plan that will insure the immediate resumption of work on the canal and its continuance to completion; that each city send a delegation, if possible, to wait on Congress and press the passage of such a bill at the time above indicated, and if not practicable to send delegation, to forward their resolutions in regard to the matter. I do not believe that any issue before the American people today is of such vast consequence to the country as large."

A NEW YORK dispatch states that a syndicate of Chinamen intend buying several thousand acres of South Carolina rice land for cultivating that plant. About 160 people will work in the fields.

A Vigorous Denunciation of Incorrect Statements.

MIDDLESBOROUGH, KY., November 22.

Editor Manufacturers' Record:

The recent decree of the Federal Court at Louisville, ordering the sale of the properties of the American Association, has set all the howling dervishes of the I-told-you-so order to dancing and screeching. With scarcely a single exception, the daily, weekly, monthly and semi-occasional publications of the country have announced in flaming headlines "The Boom is Dead!" "The Last of the Middlesborough Boom!" "The Parent is Dead and the Children Must Follow!" and many other such. In all, the idea is held out that the building of a town here was a mere subsidiary enterprise of the American Association, Limited. It is true that the same mind which conceived the one brought forth the other. Alex. A. Arthur began buying up mineral lands to be sold to a syndicate or association of English capital. While engaged in this, the great beauty of Yellow Creek valley and its fitness for a town-site became impressed upon his mind. He formed the scheme of building a town here, independently of any arrangement or agreement with the American Association. The two concerns were, for a while, closely allied under Mr. Arthur's management, he being the general manager of the American Association, Limited, and president and general manager of the Town Company. The two concerns were advertised together, but the cost of advertising was borne by the Town Company alone. Out of more than \$100,000 spent for this purpose, I requested the American Association to contribute as much as 6 per cent., but was met with a flat refusal. In no sense of the word has that concern contributed willingly to the success of a single enterprise that has been established here. Instead of being the parent of the aggregated enterprises that have established, or sought to establish, themselves here, it has been the parent and source of most of the misfortunes that have come upon us. It has strangled the coal and coke companies which effected leases from it, by compelling the payment of dead rents greatly in excess of the ability of its railroads to handle the coal required to be mined; it has, under its present management, refused to make leases to parties anxious to develop its properties; in fact, it has done nothing to help the situation at Middlesborough. But where it had done all else it could conceive of to injure it, as a last and final stroke of its damnable policy of wreck and ruin, it passed into the hands of three receivers, and carried with it the other properties in which it was interested, viz, the Belt Railroad and Knoxville, Cumberland Gap & Louisville Railroad. Not satisfied with the damage this act could of itself accomplish, but with a malice born of littleness and hate, it gave it out to the newspapers through one source or another the fact that it was the parent of all things at Middlesborough, and the rest followed, that is, the headlines and "I told you so's."

When the American Association, Limited, went into the hands of a receiver (receivers), the Courier-Journal had an article under the head of "The Last of the Boom," in which it got the American Association and Town Company dreadfully mixed. I wrote at once correcting this error, and pointed out that there was no more connection between the two than there was between the Courier-Journal Company and the Kentucky & Indiana Bridge Co. My letter was published, but the very next article that appeared in that paper on the subject stuck to its ancient text, and blended the two concerns until in reading its remarks I had to stop and take my reckonings to see "where I was at."

The newspaper press of Kentucky has always insisted that the two concerns were

one. I cannot so much blame the papers outside the State for following their lead. I am frequently inquired of to know when the receiver will sell the Town Company, and if such sale will affect the holdings of the inquirer. Of course, I explain that the Town Company is not and never has been in the hands of a receiver; that it has no bonds, no mortgage, no debt, and that it is trying as hard as can be to stem the adverse tide set going by the situation of the affairs in the American Association, Limited, and the false advertising we have had as the result of its misfortunes and mismanagement.

I am afraid my impatience under the misrepresentations my company has been subjected to unfits me to write anything proper to be published. What is here said is left to your judgment to do with as you please. It is the truth.

JNO. M. BROOKS, Prest. and Man.

Middlesborough Town & Lands Co.

Cost of Making Pig Iron in Greensboro, N. C.

Mr. H. S. Fleming, M. E., of New York, a well known expert of long experience in iron-making, in a report on the cost of iron-making at Greensboro, N. C., says:

"In calculating the cost of pig iron it should be remembered that the figures of cost of material, which have been stated, are the maximum costs, and leave ample room for reduction, especially in the ore, under good management. Further, as regards the ore supply, it is assumed that all which may be used at the furnace will come from Ore Hill. This would not be the case when in operation, as a mixture of some other ores with that named will be found beneficial to the product, and may materially lessen the cost per unit of iron.

"Using the maximum figures which have been given, the cost of producing pig iron may be estimated as follows:

Two and one eighth tons ore at ninety five cents.....	\$2 01
One-half ton limestone at \$1.00.....	50
2200 pounds coke at \$2 50.....	2 75
Cost of material.....	\$5 27
Labor.....	\$1 15
Repairs, supplies and incidentals.....	1 25
Total cost.....	\$7 67

"This allows ample margin for a reduction of cost under careful and economical management, both at the mines and furnace. Probably twenty-five cents per ton on the iron may be saved by reducing coke consumption to 2000 pounds, and as much more in ore and limestone, besides that which is possible in direct labor.

"The rates of freight have not yet been given to Northern points of consumption. The distance from Birmingham, Ala., to Greensboro is 528 miles, and from the latter point to New York about 550 miles, or about half the distance from Birmingham to the same point. It is fair, therefore, to assume that the freight rate would be from 25 to 30 per cent. lower than from the latter place, or about \$2 80 to \$3.00 per ton. A point not to be lost sight of, however, is that this iron can be sold to consumers in North and South Carolina and the eastern portion of Virginia for less than its competitors, as there are no other producers in this region, and it will have a decided advantage in freight rates. Another feature of considerable importance is that an iron made from these brown hematites will soon command a better price on the market than the average Southern irons. If it should be found desirable later, a mixture might be made with the Ore Hill ore and a portion of the excellent magnetic ores occurring at Blacksburg, S. C. An iron produced from such a mixture would be of unusual excellence and undoubtedly command a special price."

If \$7.67 a ton is the maximum cost, as Mr. Fleming reports, it ought to be possible, with the reduced freight rates now offered by the railroads, to make a high-grade iron at Greensboro at \$7.00 a ton. On such a

basis iron-making there ought to be a profitable business, even in these times of low prices.

Deep Water at Velasco.

[Special Corres. MANUFACTURERS' RECORD.]

VELASCO, TEXAS, November 17.

If negotiations now pending come to a focus, Velasco promises to emerge from the crystal state the city has been in for two or three years, and enter a period of substantial development. This will mean much for the whole of South Texas.

In an interview with Dr. J. D. McGregor, of Houston, who is interested in Velasco, he said: "The reorganization of the Brazos River Channel & Dock Co. and the Texas Land & Immigration Co., which two companies originally controlled the situation at Velasco, into the Velasco Improvement Co. is bona fide. The latter company has already put up enough money, and it is now in bank, to complete the work on the jetties. The engineer of the new company states that this can be done for a sum less than \$150,000, giving the port twenty feet of water. The company is, therefore, in earnest in its work to develop the port.

"There has been some hitch regarding the transfer of the Velasco Terminal Railroad, due largely to the fact that the latter organization could not deliver the goods until a judgment of \$76,000 on the Velasco Terminal Railroad was satisfied. This judgment is held by the International & Great Northern Railroad, and the sale was to have occurred Tuesday, November 6, but an extension of thirty days was granted. However, in my judgment, the deal will go through in its entirety at that time, and the new company will at once begin active work.

"The parties behind the reorganization are Senators C. B. Farwell, of Illinois, and Calvin S. Brice, of Ohio, and parties in Boston. The railroad is twenty miles long, connecting with the International & Great Northern. It will doubtless be extended to tap the Gulf, Colorado & Santa Fe also at some point near Alvin, Texas, thus giving Velasco two lines into Houston and the North.

"When these ideas of the new company are carried out, the result will be a general revival of the whole of South Texas. I believe the Brazos river is the natural entrepot for Texas. It is navigable for sixty miles, and boats run regularly for that distance. It is the Mississippi river of the State. At Velasco the Brazos empties into the gulf. Vessels are at present loading there in fourteen and a-half feet of water, and the port will have twenty feet within six months. Mr. L. F. Cowan, a ship agent of Galveston, told me that he could load steamers at Velasco, when it possessed the same depth as Galveston, for fifty cents a ton less. This means on the tonnage of the average tramp steamer a saving of \$1500.

"Without going into details, which the readers of the MANUFACTURERS' RECORD doubtless know, Velasco first attracted attention in 1888, when Messrs. W. M. D. Lee and Jno. M. Ferguson, of Leavenworth, Kans., purchased all the lands in that vicinity, and obtained a charter from the government to construct jetties at the mouth of the Brazos. Some \$800,000 was expended, when the work was stopped for lack of funds. These parties also constructed the Velasco Terminal Railroad, already mentioned, and laid out the town site, selling \$1,500,000 worth of lots and other property. The city, therefore, is already partially developed. Foreign steamships are now loading at its docks, and the advent of the new company is looked upon with favor by Texans, who believe, and always have believed, that the mouth of the Brazos is the natural port of Texas."

FREDERIC J. COOKE.

The Nicaraguan Canal.

Recent events have so thoroughly demonstrated the necessity of the building of the Nicaraguan Canal under the auspices of the government of the United States that a universal demand has simultaneously arisen from Maine to California and from Washington to Florida for immediate commencement of work on this proposed great international highway of commerce. Political bodies, regardless of parties, have incorporated such demand in their platforms; business organizations widely removed in locality have urged upon Congress immediate action in the premises, until it seems that the national body of lawmakers will find it difficult to withstand the pressure that will be brought to bear this winter. If the desired object is not attained this year, it will be there next year for solution, and so on until it is disposed of either by favorable action on the part of this government or the intervention of some foreign power. The democratic party is in power in Congress, and it has a chance to go on record as the party of progress by striking from the beaten path of retrospection followed by previous administrations.

For Texas the Nicaraguan problem possesses a strong interest, for the building of this gigantic canal would put her harbors in touch with the main line of the commerce of the world, from which contact would result wonders of trade development beyond the wildest dreams of the most enthusiastic believers in the future of Texas. During the past summer fifty carloads of Southern cotton were shipped by rail to the Pacific coast and thence by steamer to Japan. This indicates the opening of a new market for cotton that could be held against all competition in its entirety if the canal were open for steamer traffic. Recently the British consul at Tokio, Japan, made an official report concerning cotton manufacturing in that country, which shows that it is a great and growing industry, employing a multitude of people; that the mills are run continuously, the day and night shifts each working twelve hours, and that the wages paid the women operators average but seven cents per day. That country is putting up new plants, ordering new machinery and fast adding to its producing capacity. Texas could supply this market with raw material if the fibre could be loaded into transpacific steamers direct from Texas docks.

The China-Japanese war has opened a large trade for needed supplies that the Southern States could have furnished in competition with all comers had the canal been in operation. As it is with cotton, so with all the staples and other products of labor.

The people of Texas are directly concerned, and should see that in the strain of deciding who shall be the incumbent of some fourth-class postoffice, that their congressmen do not overlook the relations of Texas to such material problems.—San Antonio Express.

New Industry for Carolina.

B. Remmer, of New York, has been making inquiries in Charleston, S. C., with the view of starting one or more factories for the manufacture of starch from potatoes in South Carolina. Mr. Remmer has requested full particulars regarding acreage planted, etc.

Visiting Texas.

An event of great significance to Texas is the visit of Chicago and St. Louis business men and manufacturers to that State. Two large delegations, numbering over 100 in all, are now in Texas. They have accepted invitations to visit Galveston, Houston, Dallas, Waco and other cities, and the benefit of their visit to Texas, from an advertising standpoint alone, will be very great, while it is not unlikely that many of

the visitors will make future investments in Texas. They should not be allowed to merely examine this State, and the MANUFACTURERS' RECORD suggests that the business bodies of other Southern cities invite them to extend the trip through the South.

BUSINESS CONDITIONS SOUTH.

Extracts from Letters to the Manufacturers' Record.

Titusville, Fla.—Phoenix Mills Lumber Co.: "Outlook for business very good."

West Point, Miss.—Hosmer & Bell: "The outlook at this point is encouraging; business is brightening up some, and the future is flattering. Quite a large Northern immigration is moving this way, which fetches money along with it."

South Pittsburg, Tenn.—South Pittsburg Pipe Works: "Business good. We are way behind with our orders. We are also having a scarcity of cars in which to ship."

Brunswick, Ga.—The Brunswick Foundry, Machine & Manufacturing Co.: "There is a slightly improved condition in business here. The comprehensive system of sewerage that is being put in here gives assurance of an unusually healthy city hereafter, and the increased depth of water over our outer bar by the dynamite process of Col. C. P. Goodyear will bring additional commerce to our coast. There is talk of building a canal to connect the waters of the Albemarle river above Darien, Ga., with Turtle river in front of our city. We think there is good reason to expect increased prosperity in the near future."

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

EMERSON, SMITH & CO., LIMITED, Beaver Falls, Pa., write the MANUFACTURERS' RECORD that the report that they are building a new saw factory at New Alexandria, Va., is incorrect, and that they have no connection with any enterprise of the kind.

WHAT is said to be the largest bottle contract ever given a single concern in one order is an order for 100,000 gross to the North Wheeling (W. Va.) Glass Co. It comes from New York and Boston parties, and will keep the factory running full time for several months.

MOBILE's coal trade has increased so rapidly that the Mobile Coal Co. has decided to enlarge its transfer facilities. A system which will transfer 3000 tons per day in all will be put in. This will be connected with the main line of the Louisville & Nashville Railway by an elevated road 400 feet long.

THE MANUFACTURERS' RECORD has been informed that the Carnegie interests of Pittsburg are securing large tracts of land in West Virginia adjacent to Green county, Pa., in which county they have recently secured, so it is said, over 70,000 acres of land. The purpose of these purchases is to drill for natural gas, to be piped to Pittsburg.

THE Southern Land and Immigration Exchange of Louisville has made arrangements with the Trans-Missouri Land Co., of Omaha, Neb.; I. J. Hof Land Co., of Milwaukee, Wis.; Southern Land & Colonization Bureau, of Minneapolis, and the Southern Immigration, Land & Title Co., of Baltimore, Md., and the work of colonizing lands in Kentucky and Tennessee will be pushed energetically. The exchange has, through its agents and attorneys, succeeded in securing lands in almost every county in Kentucky and Tennessee ranging from \$5.00 to \$10.00 per acre, and it is thought the many thousand acres of waste lands in these States will be eventually settled and developed by a good class of immigrants from the North and Northwest.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 278.]

GEORGIA CENTRAL REORGANIZATION.

One of the Greatest Steps of Progress in the History of the South.

The reorganization of the system known as the Central Railroad of Georgia can now be considered an assured fact, for the principal reason that Drexel, Morgan & Co. are back of it.

Next in importance to the reorganization of the Richmond Terminal system into what is now known as the Southern Railway by the same house comes the rehabilitation of the Central. While the MANUFACTURERS' RECORD cannot announce that the plan has succeeded, the fact that such a firm as Drexel, Morgan & Co. is back of it, coupled with their recent success in the Terminal matter, and the fact that unless they reorganize the Central system it must surely go to pieces, make it assured that the plan must be accepted to avoid a worse fate.

The several lines in the Central system aggregate 2272 miles, of which 251 are sidings, leaving 2022 miles of main line. Of the latter 356 miles are leased, including the Port Royal & Augusta, Port Royal & Western Carolina and Upson County Railway. The Port Royal companies have been contesting the right of the Central to include them, and the matter is still in litigation. The companies directly in the Central are the main line from Savannah to Atlanta, 295 miles; Milledgeville branch, seventeen miles; Montgomery & Eufaula, eighty miles; Savannah & Western, 622½ miles; Savannah & Atlantic, eighteen miles; Augusta & Savannah, fifty-three miles; Eatonton, twenty-one miles; Southwestern, 332 miles; Mobile & Girard, 122 miles, and Macon & Northern, 105 miles. The system enters Savannah, Macon, Augusta, Atlanta, Milledgeville, Americus, Albany, Columbus, in fact most of the principal towns in Georgia; Montgomery, Birmingham, Opelika and the eastern and central sections of Alabama. Through the Port Royal lines it commands the seaport business of Port Royal, S. C. Savannah, however, is its main seaboard terminal point, where it has extensive docks and yards in the suburbs and connects with the Plant system of roads for Florida. In connection with the railroad service, the Central operates the Ocean Steamship Line, from Savannah to New York, Boston and Philadelphia, comprising a fleet of seven large steamships, which have been carrying heavy cargoes of Southern products to the North from the Central's railroads. Owing to the number and location of its lines, the Central has practically had a monopoly of the freight and passenger business from Alabama and Georgia to the South Atlantic seaboard.

The first practical suggestion for reorganizing the Central, and which has led to the Drexel-Morgan plan, came from Messrs. Wilson, Colston & Co., of Baltimore, in the shape of an estimate based on the actual earnings of the lines. This estimate, which was furnished the MANUFACTURERS' RECORD by Mr. F. M. Colston in January last and published at that time, showed that the annual earnings, all told, would exceed \$2,000,000, and that by scaling interest charges on all indebtedness down to a 5 per cent. basis, except \$294,000 interest on steamship bonds, this sum would be ample to meet all interest payments. The reports of earnings since that time have more than justified this calculation. Several months ago it was currently reported that Drexel, Morgan & Co. would eventually take up the Central reorganization, and they have done so by formulating

a plan of which the following are the essential features:

The new company organized under foreclosure of the tripartite or consolidated mortgage to succeed the Central Railroad & Banking Co. of Georgia will be called the Central of Georgia Railway Co. The securities to be issued are \$7,000,000 first 5s, to be a first mortgage on the road from Atlanta to Savannah, its equipment and the equity in the steamship properties; \$13,000,000 consolidated 5s, to be a second mortgage on the main line, equipment and leaseholds, a first mortgage on the Montgomery & Eufaula, and a second mortgage on the Mobile & Girard, when titles thereto are acquired; this issue may be increased \$2,000,000 at not over \$500,000 per annum, strictly for betterments and equipment; \$10,000,000 generals, to be a first lien on the Savannah & Western, Chattanooga, Rome & Columbus and Macon & Northern, and a lien subsequent to the other bonds above mentioned on the lines which they cover; they will bear $2\frac{1}{2}$ per cent. interest for two years, increasing thereafter $\frac{1}{2}$ per cent. per annum until the rate is 5 per cent; these bonds have the same provisions for issues for betterments as the consolidated.

The other issues are: \$7,500,000 "A" income 5s; \$7,500,000 "B" income 5s; \$5,000,000 common stock. The \$1,000,000 Ocean Steamship firsts and the \$4,880,000 collateral trusts are to remain undisturbed. The Mobile & Girard mortgage is to be increased so as to fund all past due interest thereon. The new company will endeavor to secure new leases of the Southwestern and Augusta & Savannah roads at 5 per cent. upon their stocks.

Following are the proposed terms of exchange of the more important divisional bonds: Each Savannah & Western bond receives \$900 in new general bonds and \$150 in "A" incomes. Each Chattanooga, Rome & Columbus first receives \$800 in generals and \$200 in "A" incomes. Each Macon & Northern first receives \$700 generals and \$300 "A" incomes. Savannah & Atlantic and Columbus & Rome firsts receive par in "A" incomes. Certificates of indebtedness receive par in "A" incomes. Outstanding stock in the hands of the public receives par in "B" incomes.

As between the old Terminal and the Georgia Central systems, financial experts have usually regarded the latter as in the worst stage of insolvency. After it went into the hands of receivers, lawsuit after lawsuit was begun for its dismemberment. To outside investors it was considered a hopeless wreck. Many of the original securities sank practically out of sight in the stock market. As usual, the evil was magnified by newspaper reports and by stock operators, who had their own motives for making bad worse. It is doubtful if any combination of railroads in this country has caused more lawsuits, and a large share of the earnings have been used in lawyers' fees, which, on a conservative estimate, have reached a million dollars and over. The section traversed by the system received a severe blow, and the magnified accounts of its troubles have kept away many capitalists who otherwise would have placed their money in different Southern enterprises.

From the foregoing an idea can be gained of the benefit which this reorganization will create, in proving, by actual results, that these lines can be placed on a creditable and sound basis, and in disproving the too general impression that they are beyond the point of restoration. The far-reaching results for good of this reorganization, when once it is under way, cannot even be estimated at this early stage.

Work Begun on a New Road.

A dispatch from South McAlester, I. T., states that work has begun on the Choctaw,

Oklahoma & Gulf road with 300 teams and 1000 men. This is the line which recently sold \$1,000,000 in bonds through the Maryland Trust Co. of Baltimore and Philadelphia parties.

SOUTHERN RAILWAY CO.

One of the Finest Railway Trains in the World to Run Solid from New York to Florida.

In its last issue the MANUFACTURERS' RECORD referred briefly to the enterprise of the Southern Railway Co. in establishing a special train service between New York and Florida. The new Florida train is known as the "New York and Florida Short Line Limited," and leaves New York every day as the second section of the Pennsylvania Railroad's famous "Congressional Limited" at 3.20 P. M.; leaves Baltimore at 8.37 P. M., Washington at 10.05 P. M., and arrives at Savannah, Ga., the next day at 3.20 P. M.; Jacksonville at 7.00 P. M. and St. Augustine at 9.20 P. M.

The equipment of this train is as follows: Pullman drawing-room compartment car (similar to the elegant cars operated in the "New York and Chicago Limited" over the Pennsylvania Railroad) from New York to St. Augustine, Pullman drawing-room sleeping car from New York to Tampa, Pullman drawing-room sleeping car from New York to Augusta (being detached from Florida train at Columbia and arriving at Augusta at 3.30 P. M.), dining car from New York to Washington. Beginning with January 1 a dining car will be operated between Charlotte and St. Augustine, thus serving all meals en route from New York to St. Augustine from Pullman's finest "hotels on wheels." Thus the Southern Company gives passengers by its route to Florida a service which, for comfort and luxury, is unsurpassed by any railroad in this country.

Annual Meetings.

At the annual meeting of stockholders of the Annapolis & Baltimore Short Line Railroad at Hotel Sanderson, in Annapolis, J. S. Ricker, George Burnham, Jr., W. W. Brown, J. H. Smith, of Portland, Me.; F. E. Fennesen, of Boston, and C. A. Coombs, of Baltimore, were re-elected directors. J. S. Ricker was re-elected president; L. A. Burk, treasurer, and C. A. Coombs, general manager.

The annual report of the Richmond, Fredericksburg & Potomac shows gross earnings of \$764,347.20 and net earnings \$231,191.29. The decrease in gross revenue from the previous year was \$109,052.70. President Myers and Mr. J. B. Winston, secretary and treasurer, were re-elected.

At the annual meeting of the Port Royal & Augusta road, held at Augusta, the directors were re-elected. H. M. Comer is president of the company and J. H. Averill, receiver.

The yearly meeting of the Wilmington & Weldon Company (Atlantic Coast Line) was held in Wilmington. The report showed gross receipts of \$1,618,799.68, expenses \$948,526.89, net \$670,272.79, a decrease of but \$8,066.75 from the previous year. Among the improvements made during the year were a \$24,000 grain elevator at Washington, N. C., and a brick warehouse at Wilmington. The officers were re-elected.

At the annual meeting of the Baltimore & Ohio Southwestern the following officers were elected: Edward O. Bacon, president; W. W. Peabody, vice-president and general manager; William Duncan, second vice-president and traffic manager; Edward Bruce, secretary; F. E. Tracey, assistant secretary; William Jones, treasurer.

At the annual meeting of the Charleston & Savannah division of the Atlantic Coast Line, H. B. Plant was elected president; H. Walters and W. R. Ervin were elected directors, to succeed W. T. Walters and A. F. Ravenel, deceased.

ANOTHER EASTERN SHORE LINE.

Twenty Miles of Road Projected by New York Capitalists.

The New York Standard Construction Co. is about to begin the construction of a line on the Eastern Shore of Maryland which will have several novel features. The first part of the road will extend from Crisfield, Md., to Apes Hole, on Pocomoke sound, a distance of about three miles. After this is completed the company expects to extend the road through the fruit and grain district north of Crisfield, making a total length of about twenty miles.

The power will be generated from gasoline motors placed under the seats of the passenger cars. The company claims that its system is much cheaper than electric power, as no charging or generating station is required. The road from Crisfield to the sound will be used principally for carrying oysters and the products of a number of packing-houses at that point. The country north of Crisfield on the proposed route is entirely without railroad facilities. Thomas S. Hodson and O. P. Byrd, of Baltimore, are interested in the matter.

The Chattanooga Southern Railroad.

The Chattanooga Southern sale has been postponed to the 20th of December, at which time it will doubtless take place, as the reorganization committee has completed all plans for reorganization and the purchase of the road on that date. Much has been said in relation to the extension of this road to some point South. The enormous resources of minerals, coal and iron ore, and the excellent qualities of these products, on the line of the Chattanooga Southern make it very probable that for the present extensions will be confined to short branches built to the various properties situated on the line. This is rendered more certain by the fact that the mineral business of the Chattanooga Southern, under the administration of Receiver Burke, has increased threefold, the furnaces in the Chattanooga district getting a large share of their very best ores from that railroad at the present date.

The policy of making the Chattanooga Southern road a mineral carrier seems to be a wise and profitable one. It should bear the same relation to Chattanooga and her iron industries that that phenomenally successful road, the Birmingham Mineral, bears to Birmingham and the iron industries of that city.

There is yet abundant room for developments in the country south of Chattanooga, and the extension of the Chattanooga Southern Railway into that great and productive area does not involve any mistake of location.

An Important Project.

Regarding the proposed extension of the West Virginia Central from Cumberland to Hagerstown, a prominent official of the Central gives the MANUFACTURERS' RECORD the following information:

"Engineers are now going over the route already surveyed for the purpose of reducing grades, straightening curves and making other changes wherever possible to reduce the hauling resistance. When this work is completed, everything will be ready for contractors to examine the route preparatory to making bids for construction."

The East & West Railroad Extension.

Vice-President C. A. Avery, of the Columbian Equipment Co., of New York, writes the MANUFACTURERS' RECORD in regard to the East & West Railroad of Alabama extension as follows:

"While it is true that this company has procured the Highland Avenue and Belt Line of Birmingham, as also the Birming-

ham, East Birmingham & Gate City, it has not yet secured the East & West road. It is true that it expects to close a contract on that at a very early date. As soon as this is done, it is the intention of this company to proceed with the extension west to Birmingham from Pell City to a connection with our terminals."

L. & N. in Good Condition.

In connection with the statement of Louisville & Nashville finances, reports have been circulated that expenses were cut down to make a good showing to the stockholders, while the maintenance of way was neglected and the physical condition of the system generally allowed to fall below the usual standard.

Reports to the MANUFACTURERS' RECORD, however, would indicate that the contrary is the case, and that while rigid economy has been practiced, the roadbed, bridges, rolling stock, etc., have been kept in good condition. A party of Louisville & Nashville officials are now making an inspection of the entire system, and, it is stated, have found its physical condition better as a rule than when the last inspection was made in 1892.

Railroad Notes.

THE Rampart-street division of the New Orleans Traction Co.'s lines has been completed for operation by electric motors.

THE Southern Railway Co. has given an order to the Lenoir Car Works, of Lenoir City, Tenn., for 250 hopper-bottom coal cars of 60,000 pounds capacity.

J. F. FLOURNOY, of Columbus, Ga., has been appointed temporary receiver of the Georgia, Midland & Gulf road, which extends from Columbus to McDonough, Ga., a distance of about 100 miles.

THE North Side Street Railway Co.'s property at Fort Worth, Texas, has been sold to Morgan Jones, Thos. P. Worthington and others, who are interested in the Fort Worth Street Railway Co. The price paid was \$30,000.

THE North Highlands and Columbus street railways at Columbus, Ga., have been consolidated. J. F. Flournoy has been elected president of the two organizations. The consolidation was effected by the Columbus Railway Co. buying the bonds of the North Highlands system.

CHIEF ENGINEER McDONALD, of the Nashville, Chattanooga & St. Louis, writes to the MANUFACTURERS' RECORD that several miles of track of the Rome Railway have been relaid with heavier rails. No other changes will be made on this line, which has just been purchased by the Chattanooga system.

THE inauguration of the fast-train service between St. Louis and San Antonio on December 2 will shorten the time about two hours. Connection will be made at San Antonio with the Southern Pacific westbound train for Mexico and California. Under the new schedule of the Mexican International and Mexican Central the time between San Antonio and the City of Mexico will be shortened about eighteen hours, and this, with the saving of two hours between San Antonio and St. Louis, will make a total of twenty hours saved the traveler over this route from St. Louis to the City of Mexico.

Prosperity at Norfolk.

The progress and bright future of Norfolk and vicinity have been frequently commented on by the MANUFACTURERS' RECORD, and abundant reasons furnished for these conclusions. The Norfolk Virginian, in a recent article on the same line, refers to the many changes for the better which have taken place within the last twelve years, and cites several examples of men who have been remarkably successful in a comparatively short time.

PHOSPHATES.

FLORIDA PHOSPHATES.

The Associated Phosphate Companies—An Important Movement Among the Miners.

[Special Correspondent, MANUFACTURERS' RECORD.]
ORLANDO, FLA., November 24.

The recent organization of the phosphate miners doing business in the hard-rock region will, it is believed, result in much good to themselves, to the industry and to the State of Florida. Their organization is not intended to be a combine, but an association of miners having for a common purpose the protection of their business and realizing on their product such prices as will give to them a fair business margin of profit. At the same time they are not seeking to place such a price on phosphate rock as will be injurious to the sale of the product of their mines.

The association is one of defense, not offense. Several times have there been efforts to bring the miners in the hard rock region together, but each time the effort has not been successful. Each miner was endeavoring to work out the problem of success for himself, and the legitimate outcome has been a cut-throat proceeding which has been disastrous to all. It is a notable fact that the miners of Florida have not gotten the market value of their rock, and in many instances have not even received its cost price. The manufacturer has paid a pretty full price for the product when it has reached his place of business, but the middleman, who has neither planned for the industry or borne the heat and burden of production, has pocketed the profit with a brigandage almost Italian in its character. But the middleman is not altogether responsible or to blame. Treasure trove is generally regarded as free booty, without moral obliquity. To illustrate: Seventy-five per cent. hard-rock phosphate has been selling at the mines for \$4.00 per ton flat. The same product, when it reaches the bins of the European manufacturer, costs him \$6.00 to \$6.50 per ton. The middleman has not made a brokerage, but has become a merchant and made something like 50 per cent. on his purchase, and this has been accomplished, in the majority of instances, without the jeopardy of capital, without even the outlay of serious expense, without delay—almost, as it were, by the turn of the card. It is this profit that the miner is deprived of, which neither enriches the manufacturer or enures to the benefit of that most vitally interested party, the consumer, that the present association is endeavoring to save and give to those most needing and most deserving.

The organization is known as the Associated Phosphate Companies, and according to its first by-law only miners can be members. The officers are Edward Holder, president of the Hartshorn Phosphate Co., president; W. S. Trimble, president of the Standard Phosphate Co., vice-president; J. M. Graham, president of the First National Bank of Gainesville, Fla., and president of the Alachua Phosphate Co., treasurer, and David Woodrow, secretary. Mr. Joseph T. Jones, of the Netherlands Phosphate Co., has been chosen European agent, and he will have headquarters in London and Amsterdam. Through him the entire product of the mines of the Associated Companies will be sold. The needs of the market will be closely watched, and the amount offered governed by the demand. Mining will be controlled and a cessation ordered, if necessary. Arrangements have been made by which ample capital is contributed for advances to miners, so as to enable them, when necessary, to hold their rock. The proceeds of all rock sold will be prorated among the associated miners according to amount contributed and the unitage. The Nether-

lands Company, whose financial backing is very strong, will be the financial agent of the association for advancing money on rock mined and held. Messrs. Edward Holder, J. M. Graham and J. K. Jackson will be a board of arbitration in matters of dispute. Each member is pledged to loyalty to the organization by a very strong contract, which can be legally enforced against him. The tonnage now pledged and promised is between 275,000 and 300,000 tons, which leaves under the best estimates of the output for 1895 about 65,000 floating. Acting with the association is the Dunnellon Company, and the Cie de Phosphates de France is also expected to co-operate. In this way it is expected that the profit to the producer will be increased \$1.50 to \$2.00 per ton. Without any radical change in the price of rock to the manufacturer, speculation in the product will be essentially stopped, and the miners will no longer be compelled to give their rock away. This movement is the outcome of the constantly-narrowing margin from various causes in the price of rock, until profitable production has been rendered almost impossible. An officer of the Associated Companies has compiled a list of the now working companies, which shows that 16,000 tons per month have been cut off by the very causes above enumerated, which would be monthly adding to wealth of the miner, the carrier and the world.

This information is from the best sources, and may be relied on. If the association succeeds in compassing its objects, the future of rock-mining in Florida will be assured, and will rest on a firmer business basis than ever before.

The Bone Valley Phosphate Co. shipped three cargoes of pebble phosphate through the port of Tampa during November.

It is likely the Black Creek Phosphate Co., at Middlesburg, will shortly resume operations.

The great mines of the Dunnellon Company have been quite seriously troubled with water from the recent heavy rains. The difficulty is being now speedily overcome.

The York Phosphate Co., eight miles southwest of Ocala, has completed a very well-appointed plant of seventy tons capacity, and is now contracting for a spur to the Plant system, distant four miles.

The new mine of the Fort White Phosphate Co. is developing finely, the quality and quantity of the product being exceptionally good. J. H. JONES.

Another View of the Matter.

A letter in the Times-Union, of Jacksonville, takes very strong ground against the form of contract adopted by the Associated Phosphate Co., to be signed by miners joining that company. The letter gives the articles of contract in detail, and then adds:

"The miners, in appointing the Associated Phosphate Co. as their agent, with absolute power to sell at any and all prices, terms and conditions, make this company their master; in other words, they sell their mines, plants, stock, tools and finally themselves to the Associated Phosphate Co., and give up all their rights to decide about their own affairs and property, but simply go to dig phosphate, even at losing prices, if the Associated Phosphate Co. wants them to do so. And with all this they must be satisfied, and bear all responsibility themselves for the quality—as it may turn out in Europe, where it is out of their reach and control—for the output weights, accept every settlement, etc. Besides that, they have to pay all expenses, any and all rates of ocean freight which may be accepted by the Associated Phosphate Co. or their agents in Europe, and in addition the commission of twenty-five cents per ton.

"The expense for separating the phosphate in the vessels is often rather heavy, and, of course, charged to the miner, to

give him the full advantage of bearing the responsibility for the quality and weight. There are many doubtful qualities mined in Florida, but the broker used to bear the responsibility for the output analysis in Europe, and in order to diminish his risk he mixed the doubtful rock with the best qualities, bought at high prices, to run up the grade, because the price at the mines of, say \$5.00 per ton, cannot bear such heavy deductions as can be made in Europe after about \$7.00 is paid for transportation, and the value being there about \$12.00 per ton.

"The miner's option to ship his rock over the nearest port is not always advantageous to the shipper, because the different ports offer different advantages, and the shipper knows best which port will suit for certain phosphates.

"Article 7 binds the miner to accept European analysis and weights, because European fertilizer men do not buy on American terms. Florida miners had their experience in former years with output weights and analysis, loss through handling, etc., so that they wanted to sell only f. o. b. cars at the mines with American weights and analysis; however, they may have changed their mind about it.

"How much kicking will be on the side of the miner against settlement of lots under guarantee, when they perhaps do not get a cent for their phosphate at the mines, because the European buyer asked an allowance of \$5.00 on the \$12.00, as it has happened.

"Formerly the miner never allowed the buyer to charge his expenses or paid him a commission of twenty-five cents; he expected that the buyer pay his own heavy expenses and try to make profit enough to pay for the handling and the great risk incurred in buying on American terms and selling on European terms.

"The old-established firms in this trade always tried to hold the prices against the competition of other phosphates, and if these prices did not succeed the miner will be certainly mistaken in his belief that a firm appointed as agent for the Associated Phosphate Co. in Europe—which handled an inconsiderable quantity, but good quality, and which has customers only for such quantities—will be able to place a large quantity, and at the same time partly doubtful material, and after all raise the market price. If the miners, according to article 13, are anxious to reduce their output or to shut down their mines, they can do so just as well after their own decision without having to be asked by their masters—the American Phosphate Co.

"The conditions under which the miners are digging their phosphates are various, and a price which is profitable to one miner is ruinous to the other.

"Buyers never submitted such ironclad contracts as the above to the miners when purchasing phosphate, and all miners would have laughed at them at a proposition like the above. Why, then, do they take the proposition from the Associated Phosphate Co. so serious? The money for the advance of 60 per cent. of value will come from Europe, and the parties in Europe will certainly secure for themselves the right to sell on the basis of above contract, viz.: At any and all prices, terms and conditions, etc. Miners say the board of directors of the Associated Phosphate Co. will dictate the prices in their (the miners) interest. But would any business man in Europe advance several hundred thousand dollars and risk an uphill work to raise the price, without an equivalent for it; that is, to sell on basis of above contract?

"The miners joining the Associated Phosphate Co., in signing the above contract, evidently show a blind confidence in the ability and integrity of the board of directors and their European agents.

"Considering all this, I would like to ask

you what has been brought about by the original idea—that the phosphate trade and prices can only be improved upon by advances to the miners to enable them to hold back their phosphate from the European market in times of low prices?"

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, November 29.

The phosphate market has ruled quiet, with no urgent demand from any source. Out-of-town buyers are only purchasing to supply present necessities, and local manufacturers are not in the market to any extent. The reports from mining sections are generally favorable, and in South Carolina the development, both among river and land miners, is being prosecuted with vigor. The Florida phosphate field is being actively worked, and the output promises to be larger than usual this year. There is a good domestic and foreign demand, and for December and January loading there are a number of vessels chartered. The market closes firm at the following quotations: South Carolina rock, \$3.25 to \$4.00 for crude, \$4.50 for hot-air-dried and \$6.50 to \$7.00 for ground rock, all f. o. b. Charleston. Florida rock is quoted \$4.50 to \$4.75 for river pebble and \$4.75 to \$5.00 for land pebble, all f. o. b. Tampa or Punta Gorda. The only local charter reported is the schooner John C. Sweeney, Ashley river to Baltimore on private terms. In New York the tonnage market remains unchanged. The spot supply of steamers and handy-size sail vessels is small and charter rates are fairly well maintained. A schooner, 349 tons, was taken on Saturday from Charleston, S. C., to Philadelphia with phosphate rock at \$2.10, and one each, 383 and 496 tons, from Elizabethport, N. J., to Savannah with fertilizer at \$1.00; a schooner, 832 tons, from Port Tampa, Fla., to Philadelphia or Baltimore with phosphate rock at \$2.00.

FERTILIZER INGREDIENTS.

During the past week the market for ammoniates has ruled quiet, with a moderate demand. There has been some business doing in blood and tankage, which are steady at the recent decline. Sulphate of ammonia is steady, with a fair inquiry at quotations. For nitrate of soda the market shows a stronger feeling. In New York round lots are quoted \$2 12½, and for small parcels \$2.15 is an inside price.

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	3 35@ 3 40
Sulphate of ammonia, bone.....	3 30@ 3 35
Nitrate of soda.....	2 20@ 2 25
Hoof meal.....	2 10@ —
Blood.....	2 20@ 2 25
Azotine (beef).....	2 30@ 2 35
Azotine (pork).....	2 30@ 2 35
Tankage (concentrated).....	2 00@ —
Tankage (9 and 20).....	2 00 and 10
Tankage (7 and 30).....	19 00@ 20 00
Fish (dry).....	24 00@ 24 50
Fish (acid).....	15 00@ 15 50

Phosphate and Fertilizer Notes.

THE British steamship Sir William Armstrong was loading a cargo of cotton and phosphate at Brunswick, Ga., on the 23d inst.

THE steamship Haxby cleared from Savannah last week with 1508 tons of phosphate for Birkenhead, and other merchandise for Liverpool.

THE steamer Loch Etire, which cleared from Brunswick last week, took out as part of her cargo 2000 tons of phosphate for Bremen and Hamburg.

THE amount of privilege tax on fertilizer tags collected by the State for the fiscal year 1893-94 from the companies operating in South Carolina amounted to \$43,423.88.

THE British steamship Teelin Head, of the Head Line of steamers, cleared from Brunswick for Garston Dock and Liverpool on Friday last. She took 859 tons of phosphate rock and other merchandise.

THE Anglo-Continental (late Ohlen-dorff's) Guano Works will in future be rep-

resented in Florida by Mr. Anton Trubenhach, with office at Ocala, Fla. He is authorized to arrange purchases and shipments of phosphate for this company's account.

THE phosphate business is more active at Fernandina, Fla., and shipments are expected to improve during December. One steamship and two sailing vessels are loading phosphate, while several steamers are expected shortly to load cargoes for European ports. The British steamship Inishowen Head, of the Head Line of steamers, arrived on the 21st and sailed with 2000 tons of phosphate from the Marion Phosphate Co. She will complete her cargo at Brunswick, Ga.

ADVICES from Bartow, Fla., state that the works of the Bone Hill Phosphate Co., located on property recently purchased from "Phosphate" Cox near Phosphoria, will be commenced about January 1. The Winston & Bone Valley Railroad will be extended to this plant, and will be ready when the works open for business. The owners and directors of this new company are all Massachusetts men. Henry S. Bates, of Boston, is president, and Thomas H. Clery, of Boston, treasurer. The directors are Edmund Davis and George F. Fellows, of Hyde Park, and Andrew Washburn, of Boston. Captain Beatty is a director and general manager, with headquarters at Bartow, Fla. Captain Beatty was formerly connected with the Bone Valley Phosphate Co., and gives it as his opinion that the outlook is bright for the development of phosphates in South Florida. He states that the Florida supply is a substantial one, and with equal railroad rates companies can operate cheaper than in any other State.

Iron Markets.

CINCINNATI, November 24.

With the exception of a few customers who are testing the markets with the intention of covering their probable wants until July 1, 1895, there have not been many important inquiries for pig iron during the past week. All salesmen report about the same story, which is that buyers tell them to call again after the first of the year. Then, if orders for castings are coming in freely, it is probable that contracts will be covered. The noticeable feature is that so many foundries are in immediate need of iron on orders already booked. There is a scarcity of cars, especially in the South, and furnaces cannot get enough empties to ship the iron when wanted. This, of course, indicates that exceedingly small stocks are carried by consumers. In spite of the well-filled order books reported by Alabama and Tennessee companies, there is a lively competition for business, and shrewd buyers have been finding weak spots.

Just now the supply of Lake Superior ore is greater than the demand, and it is thought that there may be some accumulations during the next six weeks. After that time everyone is looking forward to see the output of all furnaces now in blast move off easily.

Collections are good—comparatively few notes are given and failures are infrequent.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry.....	\$ 9 75@10 00
South. coke No. 2 foundry and No. 1 soft.....	9 25@ 9 50
Hanging Rock coke No. 1.....	12 00@ 12 50
Hanging Rock charcoal No. 1.....	16 00@ 17 00
Tennessee charcoal No. 1.....	14 00@ 14 50
Jackson county stone coal No. 1.....	14 50@ 15 00
Southern coke, gray forge.....	8 50@ 8 75
Southern coke, mottled.....	8 25@ 8 50
Standard Alabama car-wheel.....	15 75@ 16 75
Tennessee car-wheel.....	15 50@ 16 00
Lake Superior car-wheel.....	14 00@ 14 50

BUFFALO, November 24.

Interviews with the foundry trade bring to light a tone of confidence and a general report of slowly improving business. The demand for pig iron is of a healthy nature, which keeps pace with the natural supply for this region. Were it heavier, more distant sources would have to be called

upon and slightly-advanced views be necessary in order to let them into this market. There is some disposition to cover requirements for all of 1895, but sellers are reluctant to consider such trades, and so not much is accomplished.

An unexpected scarcity in the popular brands of Lake Superior charcoal iron has developed during the week, and one prominent company has withdrawn absolutely from the market until the opening of navigation next spring.

We quote on the cash basis f. o. b. cars Buffalo:

No. 1 foundry strong coke iron Lake Superior ore.....	\$ 11 25@11 75
No. 2 foundry strong Lake Superior ore.....	11 25@ 11 50
Ohio strong softener No. 1.....	12 25@ 12 50
Jackson county silvery No. 1.....	15 75@ 16 75
Lake Superior charcoal.....	13 50@ 14 50
Southern soft No. 1.....	11 50@ 12 00
Hanging Rock charcoal.....	18 50@ 19 00

ST. LOUIS, November 24.

Everyone was looking for better times in the iron trade after the elections, but the "wise men" now say that the improvement will scarcely be noticeable until the turn of the new year. Be this prediction true or false, there is apparently no increase at present over the past two months, either in demand or consumption of iron.

There is no desire to see values on pig metal lowered below the present basis of prices, and it is claimed on good authority that a further shrinkage is improbable.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$10 75@11 25
Southern coke No. 2.....	10 00@ 10 25
Southern coke No. 3.....	9 75@ 10 00
Southern gray forge.....	9 50@ 9 75
Southern charcoal No. 1.....	14 00@ 14 50
Missouri charcoal No. 1.....	12 50@ 13 00
Ohio softeners.....	14 00@ 14 50
Lake Superior car-wheel.....	15 50@ 16 00
Southern car-wheel.....	16 75@ 17 00
Genuine Connellville coke.....	4 50
West Virginia coke.....	4 75

We quote for cash delivered Boston:

Alabama No. 1 foundry.....	\$12 00@12 25
Alabama No. 2 foundry and No. 1 soft.....	11 50@ 11 75
Alabama No. 3 foundry and No. 2 soft.....	11 00@ 11 25
Alabama No. C. C. car-wheel.....	18 50@ 19 00
Strong L. S. coke iron No. 1 foundry.....	14 25@ 14 75
Lake Superior charcoal car-wheel.....	16 50@ 17 00
American-Scotch (Northern) No. 1.....	14 50@ 15 00
Jackson county silvery No. 1.....	17 25@ 18 00

We quote for cash f. o. b. New York:

No. 1 standard Southern.....	\$11 50@12 00
No. 2 standard Southern.....	11 00@ 11 50
No. 1 standard soft.....	11 00@ 11 50
No. 1 foundry lake ore coke iron.....	13 50@ 14 00
No. 2 foundry lake ore coke iron.....	12 50@ 13 00
Lake Superior C. C. W.....	15 00@ 15 50
Southern C. C. W.....	18 00@ 18 50

We quote for cash f. o. b. Philadelphia docks:

Standard Alabama No. 1 X.....	\$11 50@12 00
Standard Alabama No. 2 X.....	11 00@ 11 50
Strong lake ore coke iron No. 1 X.....	13 50@ 14 00
Strong lake ore coke iron No. 2 X.....	12 50@ 13 00
Lake Superior charcoal.....	15 00@ 15 50
Standard Alabama C. C. W.....	18 00@ 18 50

ROGERS, BROWN & CO.

Developing a Water-Power.

Utilizing idle water-powers is a phase of Southern development which is receiving much attention. The MANUFACTURERS' RECORD has noted from week to week the different movements in this direction. The latest employment of such power is the work to be commenced shortly by the Anderson Water, Light & Power Co., of Anderson, S. C. This company will develop a water-power five miles from the city of Anderson, electrically transmitting the energy to the point of distribution. About 200 horse-power will be developed at the start. This will furnish power to operate the company's water works and lighting plant, and as most of this power will only be required at night, the plan is to rent it out to manufacturers during the day. Contract for the electrical apparatus has been awarded to the Stanley Electric Manufacturing Co., of Pittsfield, Mass. Work is to be commenced at once, and it is expected to have the plant in operation by the middle of next January. William C. Whitner is general manager and chief engineer of the Anderson Company.

D. U. FLETCHER, R. G. Ross and others, of Jacksonville, Fla., have purchased a tract of land in what is known as the New river district, about 40 miles from Palm Beach. The property will be used for growing fibre for material for brushes and other articles,

FINANCIAL NEWS.

Virginia's Debt.

The status of the debt of the State of Virginia is shown by the forthcoming report of Josiah Ryland, Jr., the second auditor of that State. Nearly all of the old debt outstanding has been funded in the new low-rate-of-interest securities. There is still outstanding, however, bonds amounting to \$1,271,223.62 and interest in arrears aggregating \$1,831,753.97, a total of \$3,102,977.59. Included in this sum are bonds and interest held by the United States government, against which the State of Virginia claims an ample offset; also sundry bonds, with interest, which were issued to several works of internal improvement and cannot be funded, and large amounts of old arrearages of interest which, it is believed, will never be called for, as well as bonds and coupons which are supposed to be lost. The estimate is, therefore, that the aggregate of new debt, which now amounts to \$17,373,243.26, will never exceed \$18,250,000. This will make the entire debt of the State:

Riddleberger's.....	\$6,331,581.40
Centuries.....	18,250,000.00
Total.....	\$24,581,581.40

The Riddleberger's bear 3 per cent. annual interest, and the centuries 2 per cent. for six more years, and then 3 per cent. for ninety years. The annual interest charges for the whole amount for the next six years would thus be \$554,947.44. This does not include the bonds held by institutions of learning, which aggregate \$2,466,455.85, with annual interest amounting to \$146,331.32, these having been put on the same footing with regular appropriations. The time for funding old securities expires on January 1, 1895, and so far during 1894 there has been funded \$652,495.66 of principal and \$391,802.97 of interest, a total of \$1,044,298.63. The new bonds issued amounting to \$712,725.61. The commissioners of the sinking fund have purchased during the year \$337,000 of century bonds at a cost of \$199,291, and it is hoped that a sufficient amount can be appropriated each year for this purpose to so reduce the debt by 1901, when the interest is increased to 3 per cent., that the annual interest charges will not amount to more than they are at present.

Plenty of Money in Texas.

"The banks have plenty of money," remarked Mr. O. C. Drew, cashier of the Merchants and Planters' Bank of Houston Texas, "but there is a falling off in the demand for cash. We have large blocks of cash subject to drafts from country banks, but they are not calling for it, from which I would infer that planters have sold sufficient cotton to pay pressing debts, and are now in position to hold back for better prices, which it seems must eventually come."

Mortgages Few in Louisiana.

As the government statistics of land ownership in the various States continue to be published, the Southern States continue to show an extremely creditable condition. The record of Louisiana shows that over 50 per cent. of the farm-owners hold their property free from debt. In the city of New Orleans about 22 per cent. of the people own their own homes, and of these 95 per cent. are free from mortgages. In the two Louisiana cities next in population to New Orleans the percentage of home-owners is nearly twenty-five, and of these 92 per cent. have their property free from debt.

New Financial Institutions.

A new local insurance company will probably be formed at Chattanooga, Tenn., by Sumter Cogswell, of Memphis. The Imperial Insurance Co., of London,

England, has established its office for the South at Atlanta, Ga., with J. T. Dargan as manager.

A bank has been organized at Kelsey, Ky., with D. T. Byrd, president; J. W. Rice, vice-president; H. E. Rice, cashier, and J. C. Elder, Jr., assistant cashier.

The Lafayette Insurance Co. has been chartered at New Orleans, La., with Louis Mathis, president, and Dr. J. H. Maloney, vice-president. The capital stock is \$150,000.

New Bond and Stock Issues.

Annapolis, Md., has voted to issue \$13,000 of 4 per cent. bonds to pay the city's indebtedness.

Pensacola, Fla., will hold an election on December 4 to again vote on the proposition to issue \$60,000 of 6 per cent. securities to pay the floating debt of the city. F. C. Brent, M. F. Gonzalez and W. S. Keyser are named as trustees to handle the loan.

Under a decision just rendered by the Supreme Court of Tennessee, the city of Knoxville is required to issue \$225,000 of bonds and interest, aggregating \$300,000 in all, to the Knoxville, Cumberland Gap & Louisville Railroad. The bonds were voted to the road by the city. When the road was finished the company applied for the bonds, but the city refused to issue them on the ground that the road had not been completed within the time specified. The railroad gained its case in the lower courts, and the city appealed to the supreme body.

The committee on securities of the Baltimore Stock Exchange has decided to recommend the listing of the securities of the Southern Railway Co. The securities aggregate \$106,311,000. They consist of first consolidated 5 per cent. mortgage bonds, due 1894, numbered from 1 to 21,911, inclusive, \$21,911,000; East Tennessee reorganization lien 4 1/2 coupon bonds, due 1938, numbered from 1 to 4500, inclusive, \$4,500,000; voting trustees' certificates for 1,199,000 shares of stock at a par value of \$100 each, representing the common stock of the company, \$119,900,000; voting trustees' certificates for 500,000 shares at a par value of \$100 each, representing 5 per cent. non-cumulative preferred stock, \$50,000,000.

Interest and Dividends.

The Bank of Buford, Ga., has declared an annual dividend of 8 per cent.

The Charleston (S. C.) Mining & Manufacturing Co. has declared a quarterly dividend of \$1.50 per share.

A dividend of 3 1/2 per cent., payable December 4, has been declared by the Augusta & Savannah Railroad. This is the dividend that would have been declared last June had the funds been in hand. If the receivers of the Georgia Central pay the amount of the rental due next month, another dividend will likely be declared.

Financial Notes.

S. A. SPELLINGS has been elected vice-president and W. T. Atkins made cashier of the National Bank of Jefferson, Texas.

UNDER a resolution of its stockholders dated November 5, 1894, the First National Bank of Kirksville, Mo., has gone into voluntary liquidation.

A BILL has been introduced in the Alabama legislature to confirm the incorporation and organization of the Bank of Selma and to grant it additional powers.

MENTION was made last week of the sale of \$46,000 of 4 1/2 per cent. refunding bonds by Atlanta, Ga. The bonded debt of this city is \$2,966,000, on which the annual interest payments amount to \$169,972.50. Assessed value of real estate is \$42,097,780, and of personal property \$11,780,565, a total of \$53,878,345. The tax rate is \$15.00 per thousand. Last year the total collections from all sources were \$1,947,777.12.

MECHANICAL.

New Planer, Matcher and Molder.

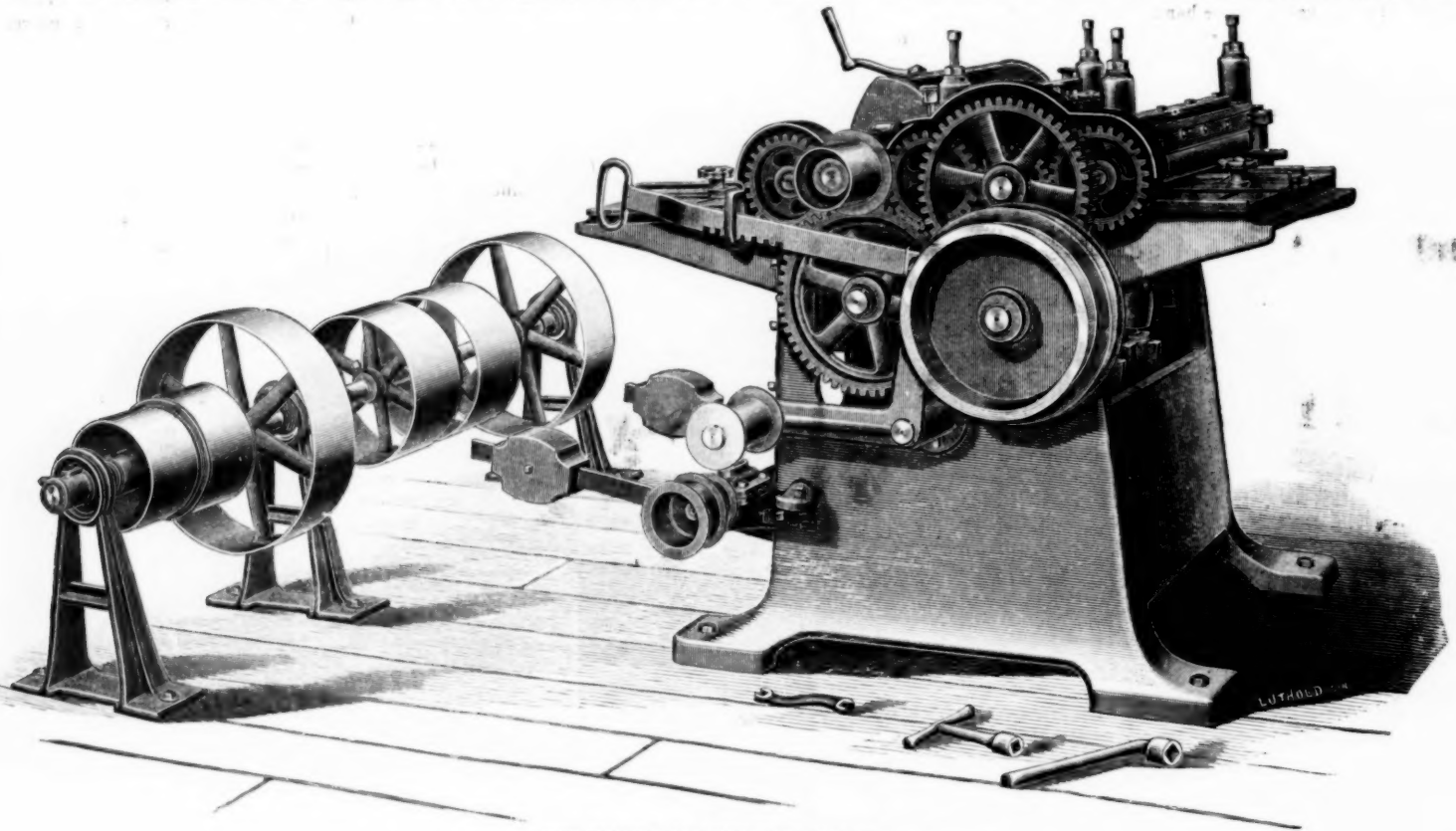
Illustrated on this page is a new and improved six-roll double-belted planer, matcher and molder. It is designed to do general work, such as planing, smoothing,

said to be that if the speed of the cylinder slacks up or changes, the feed changes in proportion. The front or in-feeding roll is held down by connected levers and weights; the other rolls are held by large steel coiled springs, making a strong and positive feed.

The matcher heads move up and down with the table, saving much time and ex-

The cylinder is jacketed or lagged with metal which is nickel-plated, enclosing an air space, adding to the finish of the engine, and, it is said, preventing loss of power through radiation. The ports are large and well proportioned, so as to develop the largest amount of power, as well as economy in the use of steam. The

The slides are made of round steel, and are, it is stated, fitted in perfect alignment with the cylinder. The piston is made hollow, so as not to have any more weight than is necessary to insure strength, and has two metallic packing rings sprung on the piston. The eccentric valve and piston rods are all of polished steel, making a fine



NEW PLANER, MATCHER AND MOLDER.

matching, molding, etc., in a first-class manner, and is sold at a low price.

This machine has, it is claimed, all the latest improvements and advantages of the most expensive machines of this class. Its qualities of simplicity, convenience of adjustments, strong and fast feeding, smooth planing and excellence of workmanship indicate its modern character.

The frame is cast in one piece, wide at the base, very heavy and of great strength and solidity. The table or bed is also cast in one piece, is quite long, planed smooth and true, and is dovetailed into the frame with long bearings as wide apart as the frame will allow, making the table as steady as if it and the frame were cast in one piece. Any wear can be instantly taken up by means of gibs and set-screws. The entire table, with matcher heads, is raised and lowered by means of the large crank handle shown in cut, an indicator on side of frame showing the exact thickness the machine is set to plane.

The cylinder is of the very best forged steel; it is double-belted, having a pulley at both ends. The journals are of large diameter, and run in long self-oiling boxes, lined with the best Babbitt and provided with improved oil wells and oil caps. The cylinder head is four-sided, being slotted on two sides to admit of patent siding, beading, molding and other cutters being attached without removing the straight knives, so that surfacing, matching and molding can be done at one operation.

A pressure bar and chip breaker are placed on each side of the cylinder, thus insuring steadiness even when planing very short and thin stuff. The pressure bars are self-adjusting, regulating themselves to the various sizes of thick and thin lumber being planed.

The feed consists of six large steel feed rolls (two out-feeding rolls, thus delivering its own lumber). The feed is very powerful and is driven from the cylinder, and is instantly stopped or started by means of the belt tightener. The advantage in having the feed driven from the cylinder is

pense in separate adjustments, and they can be entirely removed by simply removing one set-screw on the side, leaving the table clear for planing its entire width.

The matcher spindles are of forged steel and the heads of gun metal, and are furnished with solid milled bits. An adjustable bracket or pressure weight is placed between the heads for holding down the stock while matching, and the matcher heads are provided with an improved matcher clip fitted to the exact circle of the head, thus preventing the tearing out of defective lumber. This machine planes $24\frac{1}{4}$ inches wide, any thickness from one-eighth to eight inches, and matches any width up to twelve inches. There are two changes of feed, twenty-five and forty-five lineal feet per minute. Each machine is furnished complete with countershaft and one set of knives and bits for planing, matching, beading and patent siding, and necessary wrenches. The tight and loose pulleys are 12x6 and should make 900 revolutions per minute.

For further particulars address the manufacturers, Greaves & Klusman, 181 and 183 West Second street, Cincinnati, Ohio.

Portable Boiler and Engine.

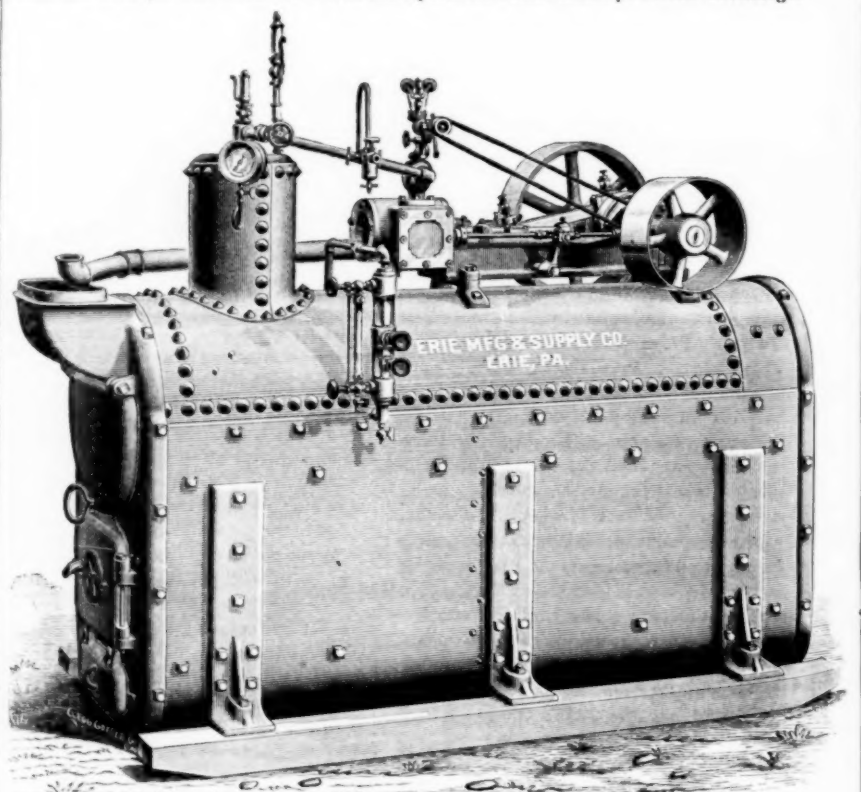
In presenting to the trade the portable engine which is illustrated herewith, the manufacturer does so with the conviction that it embodies all advantages attainable in centre-crank or self-contained engines. The aim has been to combine superiority of design with the best material and workmanship. In appearance these engines are well proportioned, with plenty of metal to insure steady and quiet operation at their rated speed.

The frame is designed so as to secure at once strength and proper distribution of metal with symmetry of shape and beauty, and present the greatest resistance in the line of motion between the cylinder and crankshaft, furnishing with itself both of the bearings, which are babbitted with anti-friction metal, and perfectly square with the other working parts of the engine.

valve is of the well-known type of slide valve, and both valve and seat are, it is stated, scraped to a perfect fit. The crankshaft is made of steel and is very large, having balanced face-plate crank discs, nicely finished. The wrist pin is made of steel and of ample size to run cool with the

finish.

This engine has proved itself especially capable for running small dynamos for electric lighting and for other uses where small power is employed. The boiler shown in the illustration is a return-flue portable boiler which possesses advantages



PORTABLE ENGINE AND BOILER.

heaviest load. The connecting rod is made of steel, and is fitted with brass boxes of the best mixture for engine purposes, and is very easily adjusted. The cross-head is made of brass and has a steel wrist pin turned perfectly round and true. There are two holes parallel with each other that fit the slide, and are easy of adjustment.

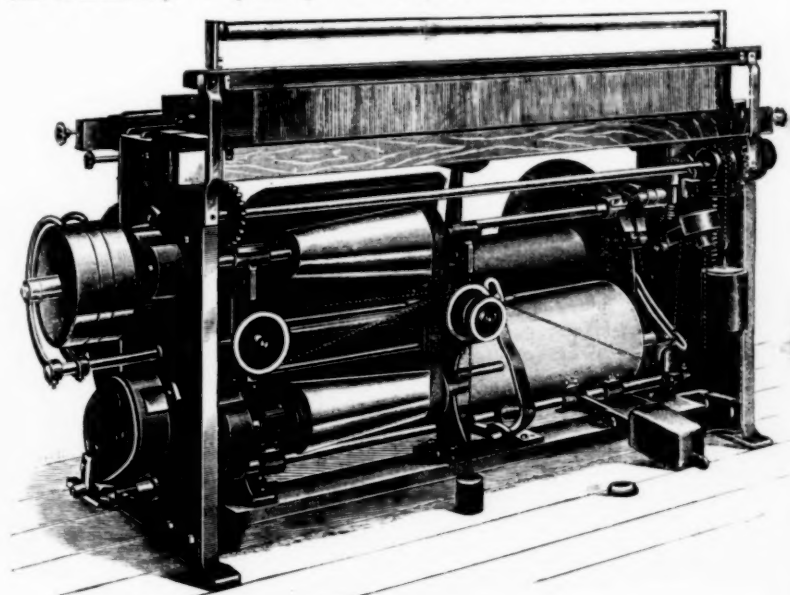
for easy steaming. It is adaptable to all kinds of fuel, and, being easy of access for cleaning, is claimed to be on equality with a well-set stationary boiler. The scale and sediment settling to the lowest part of the shell below the flues are readily removed through a hand hole in the front flue sheet. The Erie Manufacturing & Supply Co.,

Erie, Pa., which builds these boilers and engines, also furnishes the engines detached from the boilers, and any style of boiler can be supplied.

An Improved Warper.

A radical improvement is now being introduced in "Hopedale" warpers. The manufacturers of these warpers have handled a large share of the warper trade for nearly twenty-five years, and are therefore conversant with the requirements in this class of machinery. They have presented

through in the property under test is removed. Borings of all kinds are made by Mr. Simpson, including mine work, such as boring from surface to veins for steam pipes, and for carrying water from one vein to another. He succeeded the firm of Simpson & Watkins, and besides a wide experience with this concern also, himself successfully handled a large amount of this class of work. Among his patrons are the Pennsylvania Coal Co., the Delaware, Lackawanna & Western Railroad Co. and the Delaware & Hudson Canal Co.



AN IMPROVED WARPERS.

many important improvements in these machines, and the latest we illustrate herewith. The feature of this new warper is a low cylinder with eccentric drive. A small cylinder or driving drum is used, and by having its driving shaft eccentric to the main shaft the head of the beam can overlap the centre, and a full size 26-inch beam-head can be driven by a 12-inch cylinder. An advantage derived is that the machine can be made four inches lower and the width over all four and a-half inches narrower. The warper tender can therefore tie in broken ends with far greater ease, and less help can be used to tend the machines. George Draper & Sons, of Hopedale, Mass., builders of these warpers, will furnish in combination any of the recent improvements which they have perfected. Among these improvements are the cone drive, which has gone into use on several hundred warpers, and twenty-two mills have given second orders after having tried the device. This cone motion, by driving the cylinder at a constantly-decreasing speed, a continuous and uniform strain on the yarn is preserved, saving greatly in breakages. It is also said to be possible to increase the production 25 per cent., enabling a less number of machines to do the same work and save in floor space, with all incidental expenses. The beam doffer is a well-recognized improvement, saving expense and labor. The geared rise-roll is appreciated by superintendents as overcoming objections. As before stated, the manufacturers furnish any or all of their late improvements. The success with which each innovation presented by this firm has been received shows the ability of its designers to cope with all conditions, and evidences the high standard of excellence of the warpers that are being sent out of its works.

Diamond-Drilling Work.

Testing of mineral lands by competent authority is the initial step to fixing the values of such properties. A specialty is made of this work by H. P. Simpson, of Scranton, Pa. Mr. Simpson keeps employed eleven diamond drills, with capacity for from 300 to 3000 feet. When desired, a complete core of each strata passed

Steam versus Water-Power.

From time to time during the last few years the question of the relative value of steam and water-power has been much discussed. The Boston Journal of Commerce, reviewing the development of the cotton industry along the banks of great water-power streams in New England, takes the ground that the steam engine has been so much improved within the last few years as to make steam-power cheaper than water-power. The Journal of Commerce says: "The testimony of Mr. Manning in regard to the water-power at Manchester, N. H., and of Mr. Main concerning the power at Lowell and Lawrence, and other engineers who have studied the question, show that a horse-power from a water-wheel at these places costs as much as a horse-power of steam, and that if there is a use for the exhaust steam from the engine, the advantage is increased in favor of the steam engine in proportion as the use is made for the exhaust steam. The only powers that can produce more cheaply are those with a very high fall, requiring the expenditure of but a small amount for a dam and less for wheels." "Cotton mills," says the Journal of Commerce, "usually find a considerable use for exhaust steam throughout the year, and large industries that can find such a use will find less advantage in a water-power. This estimate is also based on coal at \$4.00 a ton. In parts of the South, where coal is so very cheap, the advantage in favor of steam would be still greater. There may be industries where it would be better to be near a water-power, but the cotton industry, when the present perfection of the steam engine is considered, is not one of these, and particularly so where fuel may be obtained cheaply. If the South is to induce manufacturers to build cotton mills, their great powers will not offer such attractions as cheap coal will, as the tendency is decidedly in favor of the use of steam."

The foregoing views, while contrary to general sentiment and the general estimate of the value of water-powers, are worthy of thoughtful consideration. Even if true, they may not lessen the value of water-powers; but they emphasize the fact that in Southern States where coal is abundant

and cheap the advantages for manufacturing are as great as in those where water-power is now generally used for cotton mills. It has been claimed that one of the largest cotton-mill concerns in New England, which is now floating additional stock for the purpose of building a mill in the South, has, after a careful investigation, preferred to locate where coal can be had at \$1.25 a ton rather than to utilize water-power.

New Wood-Turning Lathes.

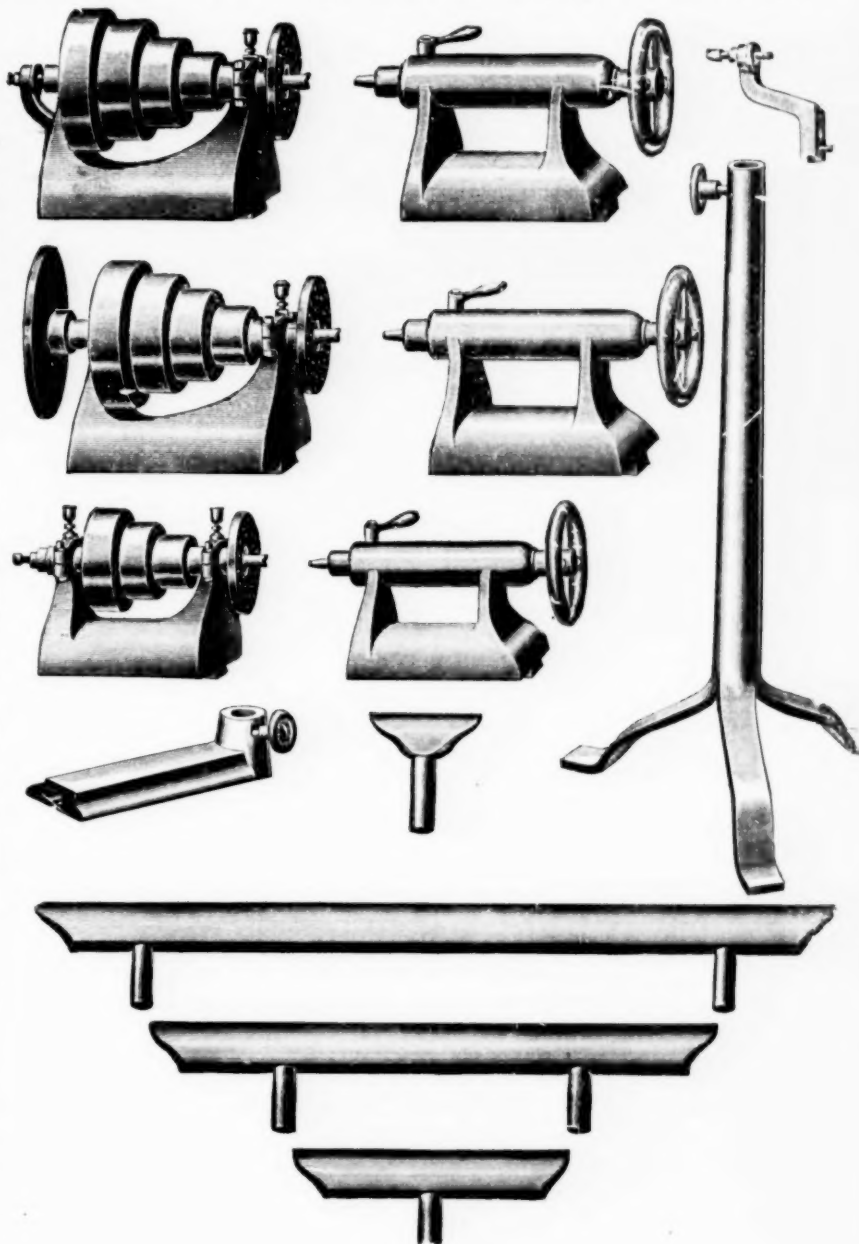
The wood-turning lathes which are shown on this page are new machines being built by the Indiana Machine Works, of Fort Wayne, Ind. These lathes are of modern and improved design, and in their construction the aim has been to consolidate the most desirable features and avoiding com-

locked in place after being set to the desired position.

The cones on 12 and 14-inch lathes are cast iron, turned and balanced, and have three speeds of feed. Cones on 16 and 18-inch machines are made of well-seasoned maple and in sections, are nicely finished, have metal sleeves passing through the centre, and are securely keyed to spindles.

The rests are planed on edges, may be brought close to the work and have steel stems or posts. Sockets are adjustable to and from centre of work, and made to lock rests in any position set. Face plates are of good size, and, as they screw to spindles, will, it is said, always centre properly.

With each single end lathe is furnished, one each, hardened steel cup and crow foot centres, one face plate, two chisels, two



NEW WOOD-TURNING LATHES.

mon sources of difficulty. The favor with which these tools are regarded shows that this has been well followed out. They are of recent design and of improved construction, are made heavy and strong in all their parts, and so that the greatest and most accurate work may be done with the least effort or loss of time.

The head and tail socks are (each) made in one cored-out casting and in a manner that they may be securely bolted to shears without danger of springing same and thus bind their bearings.

The spindles are of large diameter, made of steel, and revolve in long self-oiling "take-up" bearings provided with brass oil cups, so made as to prevent dust or grit from entering the journal boxes.

Sleeve in tail stock is of large proportions, adjustable quickly by (heavy rim) hand wheel and screw, and may be rigidly

sockets or rest holders, four rests measuring six, fifteen, thirty and forty-eight inches long, countershaft with shipper rod, and four clamp bolts with lock-nut hand-wheels; a screw chuck is likewise supplied with all 16 and 18-inch machines; an extra face plate, detachable step and floor stand is furnished with all double-end lathes. The tight and loose pulleys on all four sizes are eight inches diameter and three and a-half inches wide.

THE industrial revival in Wheeling, W. Va., and vicinity continues to increase. The La Belle Iron Works is arranging to add a tinplate plant of 600 boxes capacity per day to its works. The Bellaire Steel Works has started, after making \$20,000 worth of improvements. It is expected to place the tinplate works in operation about March 1.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 277 and 278.]

More Cotton Mills for Greenville, S. C.

Three more cotton mills are to be added to the list of industries of Greenville, S. C., which is already an important cotton-manufacturing centre. The people of this section are exhibiting considerable activity and enterprise in securing the two additional cotton mills, and the determination seems uppermost of making Greenville an important textile-manufacturing point. Two weeks ago a plan was set on foot to build a \$250,000 mill. The suggestion was taken up and pushed along by the business men and citizens. Nearly \$100,000 are now pledged to the movement, and it is understood when that sum is subscribed the balance will be forthcoming from outside parties. F. W. Poe is at the head of the project. The second mill is, however, assured and all arrangements are concluded. This mill will be operated by Messrs. O. H. Sampson & Co., of New York, who lately purchased the machinery equipment of the old Camperdown mill at Greenville. The firm has awarded contract to J. W. Cagle for new buildings in which to place this machinery. The main structure will be two stories high, 234x98 feet deep, after plans drawn by Lockwood, Greene & Co., of Boston. Boiler and engine-rooms will be separate buildings attached, and a 60x100 feet warehouse will also be built. The equipment will consist of about 11,000 spindles and the entire plant throughout will have the latest mill improvements. The third mill is projected by H. W. Cely, and it is contemplated to form a \$100,000 stock company to build the plant.

A Prosperous Southern Mill.

The directors of the Dallas Cotton Manufacturing Co., of Huntsville, Ala., held their annual meeting on the 21st inst., and elected the following officers for the ensuing year: President, G. W. Fogg, Nashville; W. R. Rison, Huntsville, vice-president; T. B. Dallas, Nashville, secretary, treasurer and general manager.

The operation of the mill has been quite successful during the past year, as was shown by the dividends declared, which were: Preferred stock, 6; common, 2, and surplus fund, 4 per cent. Directors S. M. Milliken, A. W. Green, of New York, and J. W. Davidson, of Providence, were present, and were enthusiastic over the success of the enterprise.

That \$600,000 Massachusetts Southern Mill.

The Massachusetts Cotton Mill Co., of Lowell, voted on Tuesday last not to build a mill in the South, but to organize a separate company to build a \$600,000 Southern mill to be leased by the Massachusetts Company. In effect it is the same, the only difference being two organizations instead of one.

The Texas Crop.

Reports to the Houston (Texas) Post from 104 points in fifty-nine counties of that State show that since September 1 there have been marketed this season from these places 495,479 bales, against 347,653 bales for the corresponding period in 1893. This shows an increase of 42.52 per cent. The correspondents estimate that from now until August 31, 1895, there is yet to be shipped 283,862 bales. Allowing 5 per cent. for overestimate and probable loss, there appears yet to be shipped 269,669 bales from these points, or 21.98 per cent. more than remained to be sent to market from this time forward last year. It is assumed by the Post that these 104 points may be taken as a basis to ascertain the

probable crop for this season. The increase shown at these points is 34.54 per cent. In round numbers the crop of 1893-94 was placed at 1,900,000 bales for Texas. Presuming that the rate of increase shown by these 104 points is maintained throughout the cotton-growing region, the crop this season, it is figured, would approximate 2,556,260 bales.

Textile Notes.

THE Lynchburg (Va.) Cotton Mill Co. will add eighty-eight looms to its equipment next spring.

H. E. KNOX, JR., has finished a survey for a water supply for the Fort Mill (S. C.) Manufacturing Co.

THE directors of the Globe Mill, of Rock Hill, S. C., at a meeting held last week, decided to put in 1500 additional spindles.

IT is reported at Augusta, Ga., that Mr. James Brotherton will put in operation the Algernon Mill, which has been idle for several years.

MR. GEORGE EVERETTE, secretary of the Trenton (Tenn.) Cotton Mills, writes that business with them is good now, although the price of cotton is so low.

THE Pacolet (S. C.) Manufacturing Co.'s mill No. 1 will start again next week. It has been stopped several weeks while they are putting in new flumes and wheels.

THE Thos. M. Holt Manufacturing Co., of Haw River, N. C., manufacturer of cotton goods, has decided to place a 350-light electric plant in its mill, and has awarded contract to Mr. J. E. Duval, of Charlotte.

THE subscriptions for the proposed new cotton mill at Winston, N. C., are progressing under the management of the Chamber of Commerce. It is thought that at least \$100,000 will be subscribed, and probably more.

THE new Lockhart Shoals (S. C.) Cotton Mills, mentioned last week, is now built up three stories high, and it is expected that the building will be completed by January 1. About 200 men are working upon and around the factory.

F. H. BARBER, who recently purchased for \$27,000 the Fishing Creek Spinning Mill near Chester, S. C., has leased the plant to K. McGowan, an experienced cotton-mill man and superintendent of the Enoree (S. C.) Mills, who will continue its operation.

THE Cherokee Falls Manufacturing Co.'s new mill at Blacksburg, S. C., is progressing towards completion. The new mill will have a larger equipment than the old one; it will consist of 6600 spindles and 160 looms. Operations are expected to be commenced in six or eight months.

THE annual meeting of the stockholders of the Spartan Mill was held last week at Spartanburg, S. C., and those present were much pleased with the work of the past year. A 3 per cent. dividend was declared, payable on the 1st of January. The affairs of the mill are in a most flourishing condition.

IT is reported that Paul Butler, of the New England Bunting Co., of Lowell, Mass., contemplates building a cotton mill in the South. Mr. Butler and W. R. B. Whittier, superintendent of the Whittier Cotton Mills at Lowell, Mass., are now making a tour through the South prospecting, it is stated, for a location for a \$500,000 cotton mill.

A DISPATCH from Muncie, Ind., states that the American Skewer Co., which recently built large works at Jackson, Tenn., in order to be near the source of supply for the right character of timber, will close its several other factories and handle the entire business from Jackson. This is but another illustration of the controlling advantages of the South in manufacturing interests.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Markets for Cottonseed Products.

NEW YORK, November 27.

Prices of cotton oil are fully 1½ cents lower than last quoted. It appears that the recent spurt was, after all, mainly the result of the Brazilian buying, directly or indirectly, and now that wants of exporters for Brazil are filled, the trade is buying more leisurely. A feature of the situation is the relative scarcity of off oils and the good quality of the oil now reaching this market. At prices quoted below the market is very steady, with fair export inquiry, and for prime and off grades. The latter are, however, for the moment out of the reach of the export trade, for the European markets have not at all responded to our late spurt, and are actually lower now than before the improvement of the American markets set in. At the South some trades in prime crude have been made at 20 cents loose at the mills for nearby shipment; in other cases bids of 20¾ cents for later shipments have been declined by sellers. The following prices are for barreled oils on the spot: Prime crude, 25 to 25½ cents; off crude, 23 to 25 cents; prime summer yellow, 30 cents; off summer yellow, 28½ to 29½ cents; prime summer white, 32 to 33 cents; prime winter yellow, 35 cents; cottonseed soap stock, 1¼ cents.

ELBERT & GARDNER.

NEW YORK, November 25.

At this writing the boom which characterized the period immediately subsequent to the elections has subsided, and having in view the demand from abroad, the cotton-oil market remains passive. The recent rise in values and the simultaneous decline in the English market, together with the difficulty which confronts the exporter in securing freight accommodation at anything like reasonable rates, have conjointly superinduced these conditions. Rate are aiming for a still higher level, while the prospect for shipments in material volume declines in the same ratio. While latest advices report shipments of English oil to European ports in competition with this market, no apprehension need be entertained as to their continuance. The ruling features of the home and foreign market for the moment favored such a movement, and the English cotton-oil men were not slow to take advantage of the opportunity, but the marked inferiority of the foreign product as compared with that of this country will hold in check any material progress in that direction. The demand from the West is of a moderate character, and current needs only are supplied. The unusually large influx of hogs into Western commercial centres will doubtless still further reduce the price of lard. The current differential quotations between the natural and artificial lard products are, however, so far apart that the possible decrease in values of the former will scarcely influence that of the latter. Therefore, with sound seed at a fair figure under operation in the mills, and a superior quality of oil to that which first reached this market earlier in the season arriving, together with the fact that reduced holdings of stocks for home and foreign consumption are features of the business, the future portends an active market. It must be stated that the quality of the butter oil is inferior to that of last year's output. Crude, prime, 25 to 26 cents; off quality, 23½ to 24½ cents; yellow summer, prime, 30½ to 31 cents; yellow summer butter, 33 to 34 cents; off, 28 to 29 cents; white summer, 33 to 34 cents; yellow winter, 36 to 38 cents; white winter, 37 to

39 cents; soap stock, 1¼ to 1½ cents. The slow demand for mill feeding products in England, together with abnormally high freight rates, have seriously affected cake and meal exportation. Stocks at mills are accumulating. Cake per ton at New Orleans, \$17.50, with no enquiries for the ground product.

Cottonseed-Oil Notes.

THE cottonseed-oil mill at Gadsden, Ala., has just completed extensive repairs and started up last week.

THE Union (S. C.) Oil Mill is running night and day, producing about 500 gallons every twenty-four hours. The seed is said to produce more oil than is usually extracted.

THE market for cottonseed oil at Houston, Texas, has advanced one cent per gallon. Mills report the seed now received as better in quality, the kernel being rich and yellow. Tank lots of oil are quoted at twenty to twenty-one cents. Cottonseed meal is steady at \$17.50 per ton.

STARCH FACTORIES IN THE SOUTH.

Opportunities Existing for a Profitable Industry.

In a letter to the MANUFACTURERS' RECORD an expert points out the opportunities existing in the South for profitable investments in the business of manufacturing starch. The writer of the letter has, he says, been engaged in the manufacture of the starch of commerce for more than eighteen years, and is familiar with the different processes employed, as well as with the methods used in the preparation of the by-products, held in high esteem as food for cattle, hogs and poultry. From his letter we take the following extracts:

"The refined and purified starch is very useful and of great value, and is used in very large quantities in the finishing of textiles, by manufacturers of carpets, baking powders, confections and as food, to say nothing of the enormous quantities of starch used for laundry purposes.

"No industry of this kind has as yet been established in any of the fourteen Southern States, and as the business is remunerative and eminently respectable, and since the formation in the North of the recent Starch Trust, I regard the time as most auspicious to establish such an industry at some suitable location in the South.

"The Southern trade in starch is very large, and the trust finds here a valuable territory with absolutely no opposition. Since the whole number of starch factories in the United States is twenty-four, with twenty in the Starch Trust, and every one of them located very remote from Southern markets, I reason that since the raw material (corn) is largely grown on Southern soil, starch may be made as cheaply there as elsewhere, and the difference in the railway tariffs to points of destination would certainly give the Southern mill the inside. Trade could be secured for such a factory to the limits of its capacity if the manufactured products were as fair in quality as that produced by the trust.

"There is another advantage to be considered in locating a Southern starch factory. The Eastern and New England trade in starch is very large, and for this trade the Southern mill could compete with more than equal advantages, to say nothing of the prestige of being an independent concern."

It is reported that a son of Baron Fava, of Italy, has purchased an interest in the Arkansas property purchased by Austin Corbin some time ago. This is the plantation employing convict labor.

WEST KNOXVILLE, TENN., has an effective sewer system seven miles long, which cost but \$22,000. The appropriation was \$25,000, and \$2000 was spent in constructing laterals.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department, on pages 277 and 278.]

Lumber Directory.

Readers of the MANUFACTURERS' RECORD who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

LUMBER MARKET REVIEWS.

Baltimore.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, November 29.

There has been a moderate trade demand in the local lumber market during the past week, and business has been quiet, with no indication of much improvement in the yellow-pine trade. Receipts continue light, and yardmen are buying very sparingly. Air-dried yellow-pine lumber is in fair supply, and stocks quite ample for the demand, which is confined to small lots for immediate use. In white pine there has been a fair business in progress, but the volume of transactions is not expanding to any great extent. Prices are generally very steady, with stocks ample for the current inquiry or demand. The hardwood men report business as improving, and there is more inquiry and actual business than usual. Out-of-town buyers are in the market, and the export business is better on more favorable news from the European markets. Among the planing mills business is moderately active, and orders are coming in more freely, while prices still rule very low. Box factories find trade quiet at the moment, but later on they expect to be busy.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE.		
5-4x10 No. 2, kiln dried.....	\$15 00@	17 00
5-4x12 No. 2, " " " " " "	17 00@	18 00
4-4x10 No. 1, " " " " " "	16 00@	—
4-4x12 No. 1, " " " " " "	17 00@	—
4-4 narrow edge, No. 1, kiln dried.....	13 50@	14 50
4-4 wide edge, " " " " " "	18 00@	19 00
6-4x10 and 12, " " " " " "	23 50@	24 50
4-4 No. 1 edge flooring, air dried.....	13 50@	14 00
4-4 No. 2 edge flooring, " " " " " "	10 50@	11 00
4-4 No. 1 12-inch stock, " " " " " "	14 50@	15 50
4-4 No. 2 " " " " " "	12 50@	13 50
4-4 edge box or rough wide " " " " " "	9 00@	—
4-4 " " " " " " (ordin'y widths)	8 00@	8 50
4-4 " " " " " " (narrow).....	7 50@	8 00
4-4 12-inch " " " " " "	10 00@	10 50
3/4 narrow edge.....	6 00@	6 50
3/4 wide.....	6 50@	7 50
3/4 10x16 wide.....	9 00@	10 00
Small joists, 2 1/2-12, 14 and 16 long.	7 50@	9 00
Large joists, 3-16 long and up.....	9 00@	9 50
Scantling, 2x3-16 and up.....	8 00@	9 00
WHITE PINE.		
1st and 2d clear, 4-4, 5-4, 6-4 and 8-4	48 50@	50 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 00@	44 00
Good edge culls.....	14 50@	15 50
Good stock.....	16 50@	17 50
CYPRESS.		
4-4x6, No. 1.....	20 50@	21 50
4-4x6, No. 2.....	15 00@	16 00
4-4x6, 16 feet, fencing.....	11 00@	12 00
4-4x6, rough.....	9 50@	10 00
4-4 rough edge.....	9 00@	9 50
4-4 edge, No. 1.....	15 50@	16 50
4-4 " No. 2.....	12 00@	13 00
Gulf, 4-4, Nos. 1 and 2.....	29 00@	31 00
Gulf, 6-4, Nos. 1 and 2.....	31 50@	32 50
HARDWOODS.		
Walnut.		
5-8, Nos. 1 and 2.....	65 00@	75 00
4-4, Nos. 1 and 2.....	80 00@	90 00
5-4, 6-4 and 8-4.....	85 00@	95 00
Newell stuff, clear of heart.....	85 00@	100 00
Culls.....	20 00@	30 00
Oak.		
Cabinet, white and red, Southern, plain-sawed and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	29 00@	33 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 00@	55 50
Culls.....	10 00@	15 00
Poplar.		
Nos. 1 and 2, 5-8.....	24 00@	25 00
4-4.....	28 00@	30 00
Nos. 1 and 2, 6 and 8-4.....	32 50@	33 50
Culls.....	14 50@	15 50
SHINGLES.		
Cypress, No. 1 hearts, sawed, 6x20.....	7 25@	7 50
No. 1 saps, sawed, 6x20.....	5 50@	6 00
No. 1 hearts, shaved, 6x20.....	5 50@	7 00
No. 1 saps, shaved, 6x20.....	5 00@	—
LATHS.		
White pine.....	2 60@	2 65
Spruce.....	2 15@	—
Cypress.....	2 15@	—

Norfolk.

[From our own Correspondent.]

NORFOLK, VA., November 26.

There is no rush of business at present in any department of the lumber industry here, but there are many indications of a revival of the old-time trade. There are

many improvements being made in saw-mill plants, and a number of new mills are being built at points in the State adjacent to this city. Millmen and manufacturers generally expect a good spring trade, and already inquiries are numerous, with a moderate demand for certain grades of lumber. The demand for the better grades in the rough is moderate, and the call is principally for inch stuff, No. 3 and box. Holders are now firmer in their views than they have been for some time past, and refuse to make concessions except in extreme cases. The reports from milling sections throughout the State are very favorable, and mills are now generally operating on full time. The local building demand is better, and throughout the city and suburban districts there are many improvements and buildings under way that will call for a large quantity of material. Box factories and all woodworking factories are busy. The Elwood Manufacturing Co., at Elwood Station, on the Atlantic & Danville Railroad, has commenced operations. The output at present will consist of crates, baskets and other articles of woodenware.

Charleston.

[From our own Correspondent.]

CHARLESTON, S. C., November 26.

The outlook at present is not as bright for the lumber industry as it appeared several weeks ago. There is, however, a moderate volume of trade doing, and mills are generally well supplied with orders. Lumbermen generally deplore the low prices ruling at present, and look for a better market in the near future. The demand, both foreign and domestic, is improving, and there are more inquiries. In cross-ties there is more business doing, and prices are very steady, with a good demand from railroads at several points North and West. The market closes steady, with prices as follows: Merchantable, \$14.00 to \$16.00 for city-sawed, \$12.00 to \$14.00 for railroad; square and sound, \$9.00 to \$13.00 for railroad, \$8.00 to \$11.00 for raft; dock timber, \$4.50 to \$6.50; shipping, \$8.50 to \$10.50. Shingles are in fair demand at \$5.00 to \$7.00 per thousand. The shipments during the past week are reported as follows: British steamship Wallachla for Liverpool with 4800 staves among her cargo; schooner Nellie Coleman for Port Antonio with 46,000 feet of lumber; barkentine E. S. Powell for New York with 48,800 feet of lumber; schooner Joel Cook for Philadelphia with 325,000 feet, and steamship Winyah with 9000 cross-ties. The total shipments of lumber since September 1 amount to 13,024,235 feet to domestic ports and 215,523 feet foreign, making a total of 13,239,758 feet of lumber, against 7,941,000 feet for the corresponding period last year. Coastwise freights show very little change. The inquiry for yellow-pine lumber is a shade better from South Atlantic ports. The rates are as follows: Lumber to New York, \$4.75; Philadelphia, \$4.25; cross-ties to New York, 11 to 11 1/2 cents.

Savannah.

[From our own Correspondent.]

SAVANNAH, GA., November 26.

The week under review has been moderately active in the lumber industry of this port, and the demand seems steady, with prices showing no material improvement. If millmen would reduce their output and fully co-operate on all measures for the good of the lumber trade, a speedy revival in business would follow. The late strike has had a bad effect upon business, and this is plainly indicated by the business of September, which amounted to 9,359,883 feet, of which 1,223,595 feet were foreign, and that of October was 8,447,308 feet domestic and 499,290 feet foreign, being a total of 8,946,598 feet. The market closes steady, with quotations as follows: Ordinary sizes, \$11.50 to \$12.50;

difficult sizes, \$13.00 to \$18.00; flooring boards, \$15.00 to \$22.00; shipstuffs, \$16.50 to \$25.00, and sawn ties, \$10.00 to \$10.50. The following vessels cleared during the past week: Schooner A. D. Lampson for Baltimore with 330,990 feet pitch-pine lumber, and the schooner Emma C. Knowles with 473,961 feet of pitch-pine lumber; schooner Annie Bliss for Perth Amboy, N. J., and New York with 244,622 feet, and schooner Joseph W. Hawthorn for New York with 482,972 feet; the Norwegian bark Nebo for Pernambuco with 216,974 feet; steamers for Baltimore took 60,000 feet, and New York steamers 186,000 feet and 100,000 shingles, and Boston steamers 7106 staves. The freight market is quiet, with rates steady and unchanged. The rates from this and nearby points in Georgia are quoted at \$4.00 to \$5.00 for a range including Baltimore and Portland, Me. Railroad ties, basis forty-four feet, are quoted at 14 cents. Timber rates are 50 cents to \$1.00 higher than lumber. To the West Indies and Windward rates are nominal; to Rosario, \$12.00 to \$13.00; Buenos Ayres or Montevideo, \$10.00 to \$11.00; to Rio Janeiro, \$14.00; to Spanish and Mediterranean ports, \$11.30 to \$11.50, and to the United Kingdom for orders nominal for lumber at \$4.58, per standard. Steamer rates to New York and Philadelphia \$7.00, to Boston \$8.00 and Baltimore \$5.00. A schooner, 547 tons, was taken on the 23d inst. in New York, Savannah to New York, \$4.62 1/2.

Jacksonville.

[From our own Correspondent.]

JACKSONVILLE, FLA., November 26.

During the past three months the lumber and timber industry of this section has shown considerable improvement, and the demand is more decided, with prices very steady for all choice dimensions of lumber. The opinion of lumbermen generally is that the outlook is greatly improved, and mills at points adjacent to this city are all well supplied with orders. The organization of the Southern Lumber Exchange has wrought a wonderful change in the business, and lumber dealers in the North feel that the exchange is here to stay, and have advanced prices \$1.00 per thousand feet. There is a good demand expected from railroads for lumber, as it is thought that many of them will rebuild their rolling stock, which will absorb large lots of material. The shipments of lumber during the past week have been fair, and the following vessels were among the departures: Steamer Ellen M. Carter cleared for St. Pierre, Martinique, with a cargo of 126,458 feet of boards, plank and deals and 123,996 feet of joists and scantling; the schooner Mary E. Amsden for Philadelphia with 180,000 feet of lumber, and the steamship Winyah with 100,000 feet among her cargo; schooner Victory for Nassau, N. P., with 88,000 feet of lumber; the Clyde steamers cleared with about 450,000 feet of lumber, 1000 railroad ties and 3000 bundles of shingles.

Mobile.

[From our own Correspondent.]

MOBILE, ALA., November 26.

The situation in lumber and timber at this port has not materially changed since last report, and the general tone of the market is quiet. The reports from Europe are not at all encouraging, and the timber market is even worse than last month. Stocks are generally heavy, and prices so low that shippers here do not see any business in sight while values remain at such low figures in Great Britain and the Continent. Hewn timber here is quoted 11 1/2 to 12 cents per cubic foot basis, and, although there is very little demand, manufacturers make no concession in prices, as it costs almost all they ask to cover the expense of manufacturing. Sawn timber is dull at 10 1/2 to 11 cents per cubic foot, basis forty feet average. There is some

demand for poplar from eighteen inches up at 12 cents per cubic foot. Oak is in light demand, and is almost a drug on the market at 16 to 18 cents per cubic foot, as to quality. The only timber shipment reported during the past week was 8216 cubic feet of sawn timber for Amsterdam. The total shipments since September 1 amount to 453,751 cubic feet, against 331,963 cubic feet last year. In lumber the volume of business does not seem to expand, as expected several months ago, and the demand continues light. Some orders have been received from Central America and the West Indies, the total clearances for the week amounting to about 1,500,000 feet. The following vessels cleared: Steamers Hangsund with 200,000 feet of lumber and Columbia with 80,000 feet, both for Boca del Toro, Nicaragua; bark Ragnar for Amsterdam with 381,864 feet of lumber; schooner Blonidon for Cuba with 275,000 feet, and about 75,000 feet for Grand Caymen. The shingle trade has fallen off considerably, and at present there is only a moderate demand, while the output is considerably less than a year ago. Drawn No. 1 is quoted \$3.00 delivered, and No. 2 at \$2.00; sawn 16 inch wholesale 50,000 and up f. o. b., best \$2.50, and prime \$2.10 per thousand. The freight market is unchanged. There is a fair offering of handy-sized vessels at quoted rates. The New York charters for the week are as follows: A brig 364 tons, from Mobile to Kingston, Jamaica, at \$7.00; a British bark, 903 tons, from Pensacola to Rio de Janeiro, \$15.00, \$2.00 form, and a schooner, 438 tons, from Apalachicola to New York at \$5.75, option of Philadelphia at proportionate rate.

Beaumont.

[From our own Correspondent.]

BEAUMONT, TEXAS, November 26.

There are many signs of progress in this, one of the most interesting sections of Southeastern Texas, and enterprise and industry characterizes this community. In Beaumont proper and at all suburban points there is an unusual amount of building going on, and a large quantity of lumber is being used in this direction. The general lumber market has ruled quiet, and, while conditions are unchanged, the outlook is fairly encouraging. The mills are selling at very low prices, indeed—lower, perhaps, than ever recorded in this section—but they are still busy sawing, and all have orders in advance. The demand from dealers is light, and material is moving slowly. The only real activity seems to be in the demand for export. During the week the Consolidated Export Co. has booked orders for about 800,000 feet, and now has on its books orders for more than 8,000,000 feet. The schooner Clara A. Phiney sailed for New York with 400,000 feet of lumber. The company has chartered the schooner Asa T. Stowell to carry a cargo of dressed lumber to Mexico; also a small vessel that will sail next week for San Juan Bautista. The schooner George Taulane is now at Sabine Pass loading lumber for Jamaica. The Reliance Lumber Co. took an order this week for 100,000 ties, for which the schooner Herald is now en route from Tampico to Sabine Pass. This order came from the Mexican Central Railroad, which, when sawed, will be shipped to Tampico. At Orange there has been a fair movement in yard stock, which has reduced stocks to a considerable extent. The demand for lumber is well distributed throughout the list of dimensions, which is very satisfactory to shippers. There is no improvement in the general demand for lumber expected before the 1st of January. Planters are getting very little for their cotton, and after paying expenses have but little left.

Southern Lumber Notes.

THE schooner Alma Cumings sailed from Beaufort on the 19th inst. with a cargo of

lumber for Boston. She carried about 500,000 feet.

THE Warren mill of the Warren Lumber Co., in Tyler county, Texas, was started on the 22d inst. Both mills and the planer are now running.

THE establishment of a cheap furniture factory is being discussed at White Castle, La., with good prospects of success. It will probably be built by Northern parties.

THE furniture factory at Gadsen, Ala., has recently put in new and improved machinery for the manufacture of all grades of furniture and will be in full operation this week.

THE receipts of lumber at the port of New Orleans for the week ending November 23 amounted to 1,468,608 feet, and since the 1st of August they aggregate 22,854,874 feet, against 20,848,261 feet last year.

THE Elwood Manufacturing Co. expects to begin operations this week at Elwood Station, Va., on the Atlantic & Danville Railroad. Its product will consist of butter dishes, baskets, crates and other woodenware.

THE Reliance Lumber Co., of Beaumont, Texas, has received an order from the Mexican Central Railroad for 10,000 ties. They will be shipped when sawed from Sabine Pass to Tampico by the Export Lumber Co.

THE lumbermen of Minneapolis who are cutting on the upper Mississippi and its tributaries have decided to form a log pool, and a committee is now working out the details. The various firms will subscribe stock in the pool to the amount of the logs they want to get out of the cut. The pool will then buy all logs by scale at the bank, and attend to driving and sorting them, reselling them to the mills as wanted for cutting. This plan will do away with branding and sorting them and save expenses. The pool will cut a total of 573,000,000 feet.

AMONG the clearances of lumber from Brunswick, Ga., last week were the following vessels: Steamship Loch Etire with 10,000 feet of walnut; brig Rosario for Tenerife with 82,000 feet of yellow pine; schooner Annie L. Henderson with 364,000 feet of yellow pine for Providence; schooner Almeda Willey for New London with 362,000 feet of yellow pine; brig Joron Ana for Barcelona with 180,000 feet, and the British bark Flora for Rio Janeiro with 797,000 feet. The Hilton-Dodge Company is loading the barks Australia and the Jennie Woodside. They will each carry 700,000 feet of lumber and will sail for Rio Janeiro on the same day.

AN association was recently organized in New York which, it is expected, will have a large influence on the wholesale lumber trade throughout the country. It is called the National Wholesale Lumber Dealers' Association. The organization is the outgrowth of a voluntary association which has been in existence for some months, but never legally incorporated. As now incorporated, the association represents a capital of \$30,000,000, and the business transacted exceeds \$7,000,000 a year. The officers of the association are: President, J. W. Robinson, of Robinson Bros. Lumber Co., North Tonawanda, N. Y.; first vice-president, Robt. H. Jenkins, of Cleveland, Ohio; second vice-president, E. M. Price, of Price & Hark, New York; treasurer, A. C. Tuxbury, of the W. H. Sawyer Lumber Co., North Tonawanda. The object of the association is the protection of its members against bad methods of wholesale and retail lumber dealers, the debarring of scalpers, the regulations of inspections and credits, and the arbitration of disputed matters. Among the most active members are such well-known concerns as the Export Lumber Co., Millard Lumber Co., J. S. H. Hart & Co. and Price & Hart,

of New York; Henry Bayard & Co., of Philadelphia; Price & Heald, of Baltimore, and about 150 others of the most prominent dealers of the Middle and Eastern States.

A Big Railroad Contract in Jamaica.

What promises to be a creditable enterprise on the part of American brains and energy is about to be started, and by a Southern contractor. For some years a railway has been in course of construction on the island of Jamaica, a comparatively unknown country to citizens of the United States. The island is some 150 miles in length by fifty in width, and lies a little southwest of Cuba. Its principal products are bananas, chocolate and coffee. The railway is required to afford facilities for transportation from the interior to the seaboard, and reduce the cost of getting to market from the producer.

A large part of the railway has been completed, but a section of some fifty miles in length, lying through the heart of the mountains, remains to be constructed. The island is, in fact, a succession of mountains, those found there being, curiously enough, it is said, the highest mountains east of the Rockies. The difficulties of construction through this mountainous section apparently appalled the Englishmen, and it was found necessary to appeal to the ability of this country to undertake the work. Labor is plenty and cheap, the population consisting of some 600,000 blacks and 5000 whites. The superabundance of cheap labor here has been found very useful in Central American countries, as it has been the labor storehouse for them, and especially in the work on the Panama Canal. The labor question therefore is not a disturbing element in the calculations of the contractor who is to do this work.

James P. McDonald, of Knoxville, Tenn., has undertaken the contract for doing this work, having closed with the West India Improvement Co., of New York, a contract for it. The fifty miles yet to be done has, in addition to the ordinary cuttings and fillings, twenty-nine tunnels, 193 girder bridges, nine truss bridges and eleven viaducts, some of great size, all of steel and on piers of masonry. All the tunnels are to be lined, and it will require 200,000 kegs of powder and some thousands of cans of dynamite for the blasting. Mr. McDonald will execute all the work and furnish all the material, including creosoted cross-ties, steel rails and fastenings, the steel bridges and viaducts, and also the locomotives and cars, all of which, as well as the timber and lumber to be used on the work, will be bought for him by the New York Equipment Co., No. 15 Wall street, New York. Preparatory to his departure for the island, Mr. McDonald is now organizing a large force to put on the work, with a view of completing the contract by January 1, 1896. The first instalment of men and material will leave on a steamer of the Kerr Line, sailing from Brunswick, Ga., about the 10th of December. At frequent intervals thereafter shipments will be made as necessity requires.

TRADE NOTES.

A NEAT little souvenir has been sent out with the compliments of the Chrome Steel Works, Brooklyn, N. Y. It is a spirit level enclosed in a nicked case.

ROCKAWAY BEACH, N. Y., has contracted for a Gleason & Bailey hose wagon. Active Company No. 7, of Mariner's Harbor, N. Y., lately selected a similar equipment.

THE Baldwin Locomotive Works, of Philadelphia, Pa., is building an addition to its plant. Steel-roof trusses for the addition have just been completed by the Berlin Iron Bridge Co., of East Berlin, Conn.

COLORING drawing inks as made by F. Weber & Co., of 1125 Chestnut street, Philadelphia, Pa., are meeting with generous approval, and their merits are being widely acknowledged. These inks have been recently improved, and the manu-

facturers will shortly send to the trade sample cards showing the various shades.

A BUSINESS property that offers a chance for profitable investment is advertised for sale elsewhere in our columns. It is the Potomac Shoe Factory at Alexandria, Va., comprising a large brick building and complete equipment.

THE contract noted last week as let for installing a new telephone exchange at Lynchburg, Va., was given to the Old Dominion Electrical Construction Co., of Richmond, Va. This company is installing the Mason telephones, and will place 250 of them in Lynchburg. It has also contract for overhauling the electric work at the Eastern State Hospital, Williamsburg, Va.

THE lumber industry in West Virginia has become one of the chief sources of wealth in that State, and continues to grow in importance. Investments in timber lands, where judiciously placed, have resulted in handsome returns. McGraw & Co., of Grafton, W. Va., call attention to a number of opportunities they are offering for securing such properties, and invite correspondence.

THE "New Conqueror" sandpapering machine made by J. A. Fay & Co., of Cincinnati, Ohio, is making a notable sales record. The correctness of design of this machine and its convenient and economical working have caused a large demand. The manufacturers disposed of four machines in one day and eight in one week, the average size being forty-two inches wide, and including one sixty inches wide.

A SLIGHT improvement in the woolen-machinery trade is noted by the M. A. Furbush & Son Machine Co., of 224 Market street, Philadelphia, Pa. At the works of this company are built machines for working wool into probably every commercial form. The company's experience has enabled it to properly estimate the requirements of the trade in the machinery line, and its machinery is considered to be always up to date in effectiveness and utility.

THE Pennsylvania General Electric Co. having ceased to do business as a separate organization, the office of the company at 509 Arch street, Philadelphia, Pa., is continued as a branch of the General Electric Co., with extended territory, covering Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia, Virginia and North Carolina. As is generally known, the business of the company embraces railway, lighting, power, mining and supplies.

INDIANAPOLIS, IND., will have its cascades, upon which construction work has been in progress for some time, in operation about December 1. Included in the outfit of machinery are three gas engines built by the White & Middleton Gas Engine Co., of Baltimore, Md. The engines of this company were selected in the face of strong competition, and the preference shown is a flattering recognition of the merits of the White & Middleton engines. These engines are winning high encomiums for steadiness and noiselessness of operation, as well as for simplicity, effectiveness and economy.

GROUND has been broken at Mansfield, Ohio, for a new boiler shop for the Aultman & Taylor Machinery Co. This new extension is to be completed within three months, and represents the demand for greater facilities caused by the expansion of the company's business. The growth of this concern's trade is attributable to the exceptional satisfaction rendered by the boilers manufactured at its works, and the readiness with which the demands of the trade are perceived and supplied. This company is the builder of the well-known Cook patent water-tube boiler. A distinctive advantage claimed for this boiler is that it generates the greatest amount of steam with the least amount of heat, and that in its use repairs are brought down to a minimum. Besides this particular boiler, the company also makes horizontal, tubular and flue boilers, locomotive, fire-box and all other styles.

IT is seldom that a new device is received with such enthusiasm as was manifested this week in Baltimore at a test of the Stempel fire extinguisher. A critical crowd had gathered on invitation of the agents of this new fire-fighter, including Chief Ledden, of the Baltimore City Fire Department, and a large number of business and insurance men. A frame structure about fifteen feet wide was erected and filled in with small sticks of wood, balls of wood fibre, paper, etc., and thoroughly drenched with coal oil. The city fire department had hose attached to a fire-plug for use in case the extinguisher failed to perform what was claimed. A match was applied to the frame structure, and in an instant it was enveloped in flames, whose intense heat drove back the interested crowd of spectators. When the fire was at its height, the extinguisher was brought into play. A stream was sent at the flames from a safe distance, and in a few seconds the fire was conquered. The effectiveness and simplicity of the machine caught the crowd, and a hearty round of applause greeted the really meritorious

work, and the device was generally endorsed. This extinguisher consists of a copper cylinder containing a solution which is unaffected by time or weather. At the top of the cylinder is fitted a sealed glass jar containing a chemical charge, and held firmly in place by a bronze cap; alongside is the outlet to which a rubber hose and nozzle is attached. At the bottom of the cylinder is a leaden ball. Turning the extinguisher upside down, this ball falls on the glass jar, breaking it, thus releasing the charge, and instantly a stream of ammoniated hydro-carbon gas is produced, with sufficient pressure to send it a distance of forty-five to fifty feet. The cylinder can be recharged at a slight cost. This extinguisher has met with flattering approval wherever tried, and its readiness and ease of operation are features which commend the device to all persons interested in such apparatus. The Stempel Fire Extinguishing Co., Wainwright Building, St. Louis, Mo., is the manufacturer. The Maryland Agricultural Co., 32 West Pratt street, Baltimore, Md., holds the Maryland agency.

TRADE LITERATURE.

THE faultless Furman boilers are described in a neat catalogue issued by the Herendene Manufacturing Co., Geneva, N. Y. Comfort in house heating is such an important aim that literature on this subject appeals to a large class of people. This catalogue explains the merits of the Furman boilers for this purpose, and advances a number of claims for excellency.

A PAMPHLET is published calling the attention of the engineering trade to the advantages of steel emery as an abrasive for grinding purposes. It is claimed that steel emery outwears the best Turkish emery ten to one, cutting twice as fast. Another point of excellency mentioned is that steel emery is intensely hard and does not pulverize and become inert. The Pittsburg Crushed Steel Co., Limited, of Pittsburg, Pa., is the patentee and manufacturer of steel emery. It also makes steelite, an abrasive designed for finishing brass.

GRINDING mills for poultry and agricultural purposes, also mills for grinding grain for family and stock use, manufactured by Wilson Bros., of Easton, Pa., are finding increasing demand. A catalogue issued by this firm relates the experience of a large number of users of these mills. The uniform satisfaction exhibited is a high compliment to their usefulness. The low prices at which they are sold makes them, as stated by a purchaser, "marvels of cheapness and utility." The mills grind bones, green or dry, with out any preparation.

PURE aluminum cooking utensils and other vessels of this metal are manufactured by the Illinois Pure Aluminum Co., of Lemont, Ill. The peculiar suitability of aluminum for such articles has long recommended its use, but the high price of the metal discouraged any popularity which the finished product would otherwise merit. Its freedom from poisonous salts, its durability and lightness are the points of advantages possessed, and, placed at prices within the reach of all, are calculated to insure widespread adoption. This concern aims to supply the wants of the hotel and household in this respect at popular prices. It issues a catalogue describing its product.

A CATALOGUE illustrating and describing the electrical measuring instruments manufactured by the Whitney Electrical Instrument Co., of Penacook, N. H., has been issued. Improvements have been made in this company's products, and the perfection reached assures effective and trustworthy results. It manufactures a complete line of measuring instruments, from an electric indicator to the highest grade of standard devices. Among this latter class are instruments especially adapted to the measurement of alternating currents having the advantage of direct reading, and, being portable, can be used not only for laboratory purposes, but also for outside testing. The products of the company are used by a large number of the important electrical manufacturers and meet with the approval of many electrical engineers. The catalogue gives prices and full details.

HIGH-SPEED hoisting engines, improved slate and stone-working machinery and cable-hoisting and conveying machinery are comprehensively described in a publication issued by the Bangor Foundry and Engine Works, S. Flory & Co., proprietors, Bangor, Pa. In the class of machinery mentioned this concern is, by reason of excellent facilities and abundant opportunities for studying essential conditions, strongly equipped to meet ordinary and special requirements. A feature of its product is the duplicate part system, which always insures interchangeability of like parts of the same size machines. The importance of this can be appreciated in heavy contracts, where time spent in waiting to manufacture a part of a machine injured by accident means a substantial cash loss to the contractor. The improvements and claims advanced for the machinery built by this firm are explained in the publication, and will interest those employing such apparatus.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

*Means machinery is wanted, particulars of which will be found under the head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the **MANUFACTURERS' RECORD**.

ALABAMA.

Anniston—Broom Works.—F. K. Wright has purchased the Sylacauga (Ala.) Broom Works and removed same to his Anniston plant.

Bessemer—Iron Mine.—Charles J. and Joseph R. Smith, Jr., have opened a new iron-ore mine.

Florence—Iron Furnace.—It is reported that the Spathe Iron Co. will put its furnace in blast in the near future.

Gadsden—Iron Furnace.—Needed repairs are being made to the Gadsden-Alabama furnace, and when completed operations will be commenced.

Gadsden—Furniture Factory.—New and improved machinery has been added to the Gadsden Furniture Factory and operations resumed.

Gadsden—Electric-light Plant.—The Queen City Electric Light Co. will double the capacity of its plant.

Huntsville—Hub and Spoke Factory.—A bonus is now being raised to secure a hub and spoke factory to employ sixty men. Address T. W. Pratt.

Montgomery—Lumber Plant.—A Dubuque (Iowa) firm has written to the Commercial Association relative to establishing a plant at Montgomery.

Montgomery—Coal, etc.—A bill has been introduced in the legislature to incorporate the Coosa Iron & Railroad Co.

Montgomery—Bridges, Roads, etc.—A bill has been passed by the legislature authorizing Montgomery county to issue \$300,000 of bonds for road improvements, bridges, etc.

Piedmont—Tannery.—Mr. Schroeder, of Talladega, will erect a tannery at Piedmont.

Selma—Roads.—A bill has been introduced in the legislature to authorize Dallas county to issue \$50,000 worth of public road bonds.

Selma—Water Works.—The city council has formulated a bill authorizing the city to issue \$100,000 in bonds to construct a system of water works. Address the mayor.

ARKANSAS.

Baxter—Woodworking Plant.—Skippie & Leppien will put in handle and spoke machinery.

Little Rock—Ferry.—A license has been granted to the Little Rock Ferry & Transportation Co. to operate a passenger ferry across the Arkansas river.

FLORIDA.

Kissimmee—Mercantile, etc.—The South Florida Co-operative Association, capital stock \$2500, has been incorporated to buy and sell merchandise, farm products, improve and dispose of real estate.

Tallahassee—Sugar Refinery.—Ernest M. Loeb, of New Orleans, La., contemplates building a sugar refinery in Florida.

Tallahassee—Cigar Factory.—C. A. Someilan will increase his capital and enlarge operations at his cigar factory.

Tampa—Canning Factory.—A Brunswick (Ga.) party proposes establishing a \$4000 cannery at Tampa.

Whitney—Brick Works.—Clay on W. W. Ward's property, near Whitney, will be tested, and if found of good quality, brick works will be started. J. H. Curry, of Ocala, is interested.

GEORGIA.

Augusta—Cotton Mill.—The Algernon Mill will probably be put in operation shortly. James Brotherton is reported as interested.

Bainbridge—Planing Mills.—The Flint River

Lumber & Export Co. is adding large planing mills to its plant.

Blue Ridge—Cheese Factory.—S. W. Carter, of New York, now at Blue Ridge, proposes to establish a \$3000 cheese factory.

Macon—Woodworking Factory.—The O. P. & B. E. Willingham Co. has been incorporated with a capital stock of \$25,000 to manufacture and sell woodwork, etc.

Valdosta—Packing-house.—The Valdosta Ice Co. will increase its capital from \$12,000 to \$15,000, and establish the pork packing-house noted last week.*

KENTUCKY.

Jackson—Lumber.—The Day Bros. Lumber Co. has been incorporated.

Lawrenceburg—Distillery.—The Anderson County Sour Mash Distilling Co. has been incorporated.

Louisville—Manufacturing.—The Eclipse Manufacturing Co. has been incorporated.

Louisville—Plumbing, etc.—The Smith & Strouse Plumbing & Heating Co. has been incorporated.

Louisville—Iron, Tinned and Japanned Iron Works.—Davis, Kelly & Co. are putting in machinery for the manufacture of embossed and crystalized iron and tin and japanned iron for trunk-makers.

Paducah—Canning Factory.—D. W. Sisk, of Hamlettsburg, is organizing an \$8000 stock company to build and operate a cannery.

LOUISIANA.

New Orleans—Electric-power Plant.—The New Orleans Traction Co. will build an electric-power plant.

White Castle—Furniture Factory.—The establishment of a furniture factory is talked of.

MARYLAND.

Baltimore—Artificial-stone Works.—The Architectural Stone Co. has been incorporated by E. Nelson Dorsey, Emanuel H. Congdon, Louis R. Griffith, E. Louis O'Donnell and Marion H. Frazier. Its object is to manufacture all sorts and designs of artificial stone, and it has a capital stock of \$50,000, divided into 50,000 shares.

Baltimore—Iron Bridges.—Bids will be received until December 5 for building an iron draw span and two fixed iron spans across Bear creek, Baltimore county. Address Wm. H. Shipley, superintendent bridges, county commissioners, 219 East Fayette street.

Ellicott City—Paper Mill.—The paper mill on Sucker branch, recently leased by Meyers & Frank, is receiving a thorough overhauling. A part of the paper-making apparatus has been renewed, and an additional dam has been constructed to supply water for washing purposes.

Georgetown, D. C.—Light and Power Plant.—The Potomac Light & Power Co., capital \$35,000, has been incorporated by A. H. Wilder and V. M. Watkins, of St. Paul, Minn.; G. A. King and W. E. Harvey, of Washington, D. C.

Herring-run Station (P. O. Homestead, Baltimore, Md.)—Phosphate Works.—The new works of the McAfee Raw Bone & Phosphate Co., near Herring-run station, are completed, and will be put in operation. The capacity of the factory is 100 tons of phosphate a day. Michael T. Dorsey is superintendent.

Northeast—Iron Works.—The McCullough Iron Works, which were destroyed by fire several months ago, and noted at the time as to be rebuilt, have let contract to William Spratt for the work. The building will be 120x80 feet, and will cover the bar mill, sheet mill and engine-room. A new Corliss engine will be put in, as well as a new set of hoisting, a new pump and a 30-ton burden machine for conveying the iron from one part of the works to another.

Sparrow's Point—Steel Plant, etc.—It is thought that within a few months all the departments of the Maryland Steel Co.'s extensive plant will be reopened and work resumed on a more extensive scale than ever. The delay in the resumption of the work is caused by the fact that the company is not yet fully reorganized.

MISSISSIPPI.

Carpenter—Box Factory.—W. A. Price will rebuild his box factory at once.*

Dublin—Saw Mill.—The Wickham Lumber Co. has put in a three block circular mill.

Holly Springs—Canning Factory.—Negotiations are pending with the Young Men's Business League for the establishment of a canning factory.

Pascagoula—Creosote Works.—Creosote works will be built at West Pascagoula. A Mr. Marshall will have charge.

MISSOURI.

Golden City—Canning Factory.—The business men and farmers have subscribed funds to build and equip a \$7000 canning factory.

Hannibal—Hardware.—The Hixson Hardware

Co., capital \$12,000, has been incorporated by B. E. Hixson and W. C. Ellis.

Hannibal—Shoe Company.—The Hixson Shoe Co. of Hannibal, capital stock \$15,000, has been incorporated by E. P. Bowman, J. W. Whaley, B. E. Hixson and others.

Kansas City—Vinegar Works.—Ben Zaiss will rebuild his vinegar works, recently burned.

Kansas City—Box and Power Plant, etc.—Swift & Co. will expend \$100,000 in adding to their packing plant. A new power plant will be put in, the car shops enlarged and the box factory's capacity increased.

King City—Lumber Company.—The Demmud Liggett Lumber Co., capital stock \$12,000, has been incorporated by J. W. Liggett, H. P. Demmud, John Liggett and others.

Macon—Wagon Works.—The Jobson Wagon & Manufacturing Co., capital \$30,000, has been incorporated by Thomas Jobson, Geo. B. Jobson, C. A. Jobson and J. M. Williams.

Sedalia—Hardware Company.—The Sedalia Hardware Co., capital \$15,000, has been incorporated by John M. Delby, Herold and R. W. Griffith.

Silex—Flour Mill.—Wm. M. Stotler will build a flour mill.

Siloam Springs—Hotel.—H. D. Mackay will build a hotel to cost \$50,000. Geo. F. Barber & Co., of Knoxville, Tenn., have prepared plans.

St. Louis—Fruit Company.—The Cafferata Fruit Co. has been incorporated with an all paid capital stock of \$5000.

St. Louis—Brick Company.—The Mount Pleasant Brick & Quarry Co., capital stock \$40,000, has been incorporated by H. R. Becker, Herman Reucking, John Hoge and Frederick Eistrup.

St. Louis—Car Works.—The American Car Co. will expend \$20,000 on improvements to its works.

St. Louis—Real-estate Improvements.—J. B. O'Meara, Eugene F. Williams, John Hill and others have purchased 40,000 front feet of residence property in Maplewood Park at \$10.00 per foot. About \$100,000 will be expended in grading, sewerage, macadamizing and otherwise improving this property, and contract has been let already for \$75,000 worth of improving. The purchasers will form the Maplewood Park Land & Improvement Co. to handle the property.

St. Louis—Tobacco Factory.—J. T. Drummond has obtained permit to build a tobacco factory. The building will be six stories high and cost \$100,000.

St. Louis—Woodworking Factory.—The Anthony Wayne Manufacturing Co., of Fort Wayne, Ind., will establish a plant for making washing machines, ironing boards, etc.

St. Louis—Architectural.—The Foell Architectural Co., capital stock \$2000, has been incorporated by E. Foell, August Foell and Henry L. Recker.

St. Louis—Drug Company.—The Fernow Drug Co., capital stock \$30,000, has been incorporated by J. A. W. Fernow, Richard Abner, George E. Whitney and F. H. Whiton.

St. Louis—Ladder Factory.—The Rivers Step-ladder Manufacturing Co., noted last week was incorporated by H. C. McKee, J. A. Duffy and Campbell Rivers.

West Plains—Water Works.—The city council is considering the water-works question, but has not decided upon a plan for a system, nor will anything be done probably before spring. A franchise seems to be most acceptable to the city. Address the mayor.

NORTH CAROLINA.

Ahoskie—Lumber Plant.—Sult & Co. are building a shingle, saw and planing mill; machinery all purchased.

Blittmore—Ice and Bottling Plant.—Reed Bros. and C. R. Whitaker, reported last week as erecting a new plant, will operate as the Swannanoa Ice & Coal Co. A bottling machine will also be put in.*

Haw River—Electric-light Plant.—The Thos. M. Holt Manufacturing Co. has let contract for an electric-light plant for its cotton mill.

Raleigh—Electric-light Plant.—The stockholders of the Raleigh Electric Co. have decided to authorize an issue of \$25,000 of first mortgage bonds for the purchase and installation of its electric-light plant, and to improve and enlarge its railway equipment.

Waynesville—Telephone Line.—J. E. Hellams & Co. will construct a telephone line to Asheville and establish exchange.*

Winston—Furniture and Shirt Factories.—A shirt factory is being planned for, and a furniture factory is contemplated. The Chamber of Commerce can give information.

SOUTH CAROLINA.

Anderson—Water-power Plant.—The Anderson Water, Light & Power Co. will commence work at once to develop a water-power near Anderson, and expects to have it completed by January

next. About 200 horse-power will be used at the start. Electrical apparatus has been purchased to convey the power to the city.

Baldock—Water-power Plant, etc.—J. L. Ellis has acquired a water-power, and is developing same for the manufacture of lumber, meal, grits, etc.

Blacksburg—Cotton Mill.—The new mill of the Cherokee Falls Manufacturing Co., now building, will be equipped with 6000 spindles and 160 looms.

Charleston—Starch Factory.—B. Remmer, of New York, contemplates establishing a potato-starch factory at Charleston, and is corresponding with R. B. Leiby in regard to same.

Fort Mill—Water-power.—The Fort Mill Manufacturing Co. will develop water-power for operating its plant.

Lonestar—Machine Shops, etc.—J. D. Johnson, of Blackville, will erect a blacksmith and wheelwright shop in Lonestar.

Rock Hill—Cotton Mill.—The Globe Mill will put in 1500 additional spindles.

TENNESSEE.

Chattanooga—Harness Factory.—Robert Scholze has purchased and will operate the Wm. Sharp Manufacturing Co.'s harness factory. The plant may be enlarged.

Dunbar—Distillery.—It is reported that an Owensboro (Ky.) distillery company will build a large plant at Dunbar's Cave.

Harriman—Rolling-mill Sale.—The Lookout Iron Co.'s rolling mill will be sold on December 22.

Harriman—Telephone Franchise.—J. W. Hill and S. W. Williams have each applied for a telephone exchange.

Knoxville—Publishing.—The American Home Publishing Co. has been organized with J. C. White, president and general manager, to publish an architectural journal.

Memphis—Electric-light Plant.—J. H. Smith & Co. have put in an electric-light plant.

Memphis—Electric-light Plant.—The Kennedy Lumber Co. has put in an electric light plant.

North Knoxville (P. O. Knoxville)—Sewers, etc.—The North Knoxville council had an improvement bond ordinance for \$25,000 under consideration on its last reading. The intention is to use the proceeds of bonds in putting in sewers and street improvements. Address the mayor.

Offutt—Saw Mill.—George F. Hesslemeyer, James Taylor, W. S. Roberts, Reps Jones and R. M. Black, all of Knoxville, will incorporate the Southern Lumber Co. to erect a saw mill at Offutt. The company has an option on timber in Anderson county.

Smryna—Flour Mill.—W. H. Gregory has let contract for the roller flour mill already noted.

TEXAS.

Austin—Telephone System.—The National Telephone Construction Co. is applying to the city council for a telephone system. J. M. Lindsay, C. R. Smith and others are interested.

Brenham—Water Works.—The city will issue \$40,000 in bonds to purchase the Brenham Water Works Co.'s system. Address the mayor.

Cameron—Water Works.—The Cameron Water, Power & Light Co. has let contract at \$21,802 to Jaeger & Blanchard, of Rich Hill, Mo., for the construction of its proposed water works.

Hickman—Cotton Gin.—C. L. Hamrick will rebuild his burned cotton gin.

Houston Heights—Compo-board Factory.—C. A. Smith, of Minneapolis, Minn., is equipping a plant at Houston Heights for the manufacture of compo-boards and similar material.

Longview—Canning Factory.—Phillips, Weaver & Co. will establish a canning factory at Earpville. Machinery has been purchased.

Luling—Electric-light Plant.—A charter has been issued to the Luling Electric Light & Power Co., capital stock \$20,000. Incorporators, W. R. Johnson, Davis Gregg, W. W. Lipscomb, C. Belling, F. R. Starr, Jr., J. Van Gasker, R. H. Walker and H. Keinsmith.

Mobile—Power Plant.—A power plant will be put in to supply manufacturing industries. Percy L. Mannen, Union Warehouse Building, can be addressed.

Texas City—Ship-yards, etc.—It is reported that ship-yards and dry-dock will be located at Texas City, in Galveston bay, on mainland. Myers Bros., of Duluth, Minn., are said to be interested.

VIRGINIA.

Alexandria—Foundry.—Curtin & Butt are making improvements to their foundry, and adding considerable new machinery.*

Alexandria—Brewery.—The Robert Portner Brewing Co. is making extensive improvements to its plant. Its new malt-storage elevator will have a capacity of 30,000 bushels.

Fredericksburg—Mining, etc.—E. C. Rosenzi, of

Philadelphia, Pa., is the full name of the party noted during the week as to develop mineral lands in Orange county. R. C. Ballinger, Frank Rorer and F. Douglas Heckman are also interested.

Lynchburg—New Looms.—The Lynchburg Cotton Mills Co. will put in eighty-eight looms.

Mountain Lake—Saw Mills.—A saw mill with capacity to cut 30,000 feet a day has been erected on Big Stony creek, and a much larger one will be put up as soon as the new Norfolk & Western spur is completed. A considerable amount of timber has already been cut. Address S. S. Chisolm.

Newport News—Brick Plant.—M. O. T. Coleman, of Westfield, Mass., has lately been endeavoring to organize an extensive brick plant to be located on the James river.

Norfolk—Mercantile.—A charter has been granted to the Duncan Bros. & Kight Co. to conduct a general merchandise business. The capital is not to be less than \$500 nor more than \$25,000. J. B. Kight is president; J. T. Duncan, vice president; B. F. Duncan, secretary and treasurer.

Norfolk—Barrel Plant.—The Standard Truck Barrel Co. will enlarge its plant to an output of 2000 barrels daily.

Winchester—Ice and Cold-storage Plant.—J. M. Long desires to organize a company to put in an ice and cold storage plant. Correspondence is solicited.

WEST VIRGINIA.

Glen Jean—Coke Ovens, etc.—The Collins Colliery Co. will immediately commence the construction of 100 coke ovens, large tipple, rope haulage elevators, etc. Address Justus Collins, Goodwill.

Hanging Rock Mills—Flour Mills.—McCauley Bros. have let contracts for a complete 30 barrel roller flour mill.

Hinton—Steam Laundry.—T. L. Yarbrough will equip a steam laundry.

Thomasville (not a postoffice)—Coal Company.—A charter has been issued to the Thomas-Scholz Coal Co. with a capital of \$10,000. The incorporators are J. R. Thomas, Carl Scholz, H. W. Knight, George McClintic and J. D. Lewis, all of Charleston, W. Va.

Weston—Woodworking Factory.—Gribble Bros., of Pennsylvania, will establish a woodworking plant in Weston for making boxes, etc. From fifty to seventy-five men will be employed.

Wheeling—Tinplate Mill.—The La Belle Iron Works will equip a department for manufacturing from 500 to 600 boxes of tinplate daily.

Wheeling—Implement Works.—The Riverside Iron & Steel Co. will rebuild its abandoned nail factory, tearing out the machines and remodeling the building for the purpose of changing it into a shovel factory. The new plant will make all sorts of shovels, hoes and similar implements. It will employ 200 men.

Wheeling—Water Works.—It has been decided to erect a new water-works plant for supplying Altenheim, a suburb of Wheeling, W. Va., and other surrounding territory with water. The present plant is inadequate to supply the demands. A stock company is being formed for the purpose.

Wheeling—Tobacco Manufacturing.—The Cigar Wrapper Co. has been incorporated for the purpose of manufacturing tobacco wrappers for cigars and cigarette; authorized capital \$50,000. The incorporators are Thomas Hanna, Mrs. C. M. Hanna, J. L. Sawtell, Wm. Smeltzer and John W. Classon.

Wheeling—Glass Works Resuming.—The United States Glass Co. will put in operation about January 1 factories O and H.

BURNED.

Augusta, Ga.—W. E. McCoy's brick works; loss \$20,000.

Beaumont, Texas.—Jas. S. Clubb's sugar-house, on Taylor's bayou.

Brookhaven, Miss.—W. F. Smith's grist mill and gin.

Harwood, Texas.—L. D. Seay's cotton gin.

Leland, Ark.—Cotton gin of Captain Halliday (address, Cairo, Ill.)

Uniontown, Md.—Jesse Bankert's grist and saw mills.

BUILDING NOTES.

Alexandria, Va.—Courthouse and Jail.—Alexandria county contemplates bonding for \$20,000 to build jail and courthouse. Address Frank Hume.

Atlanta, Ga.—Exposition Buildings.—Sealed proposals will be received until December 18 for erecting the superstructure for the manufactures, machinery, agricultural, electricity and forestry buildings for the Cotton States & International Exposition Co.; B. L. Gilbert, supervising architect.

Baltimore, Md.—Orphanage.—Baldwin & Pennington have completed plans for a four-story orphanage, 48x80 feet, to cost \$20,000.

Baltimore, Md.—Apartment-house.—A. L. Gorter has determined to build the apartment-house

lately noted as contemplated. The structure will be six stories high, 40x70 feet, fire-proof and with latest improvements.

Baltimore, Md.—Henry Brauns will prepare plans for the Maryland Horse Show Association's proposed buildings.

Baltimore, Md.—Warehouse.—The Security Storage Co. has purchased for \$19,000 a site for its proposed warehouse. The building will be six stories high, 95x175 feet.

Brewton, Ala.—School.—A bill has been introduced in the legislature to authorize Brewton to issue \$15,000 bonds to build and equip school buildings. Address the mayor.

Bristol, Tenn.—Hotel.—J. F. Hicks contemplates building a hotel.

Hope, Ark.—Bank Building.—The Bank of Hope will erect a new building.

Houston, Texas—Home.—Architects are invited to submit plans until December 15 for a building for the Woman's Home, to be two stories high and cost \$20,000; A. J. Walker and W. J. Friedrich, executors.

Houston, Texas—Natorium.—A \$30,000 stock company is proposed to build a natatorium. C. H. Milby, A. Dow and others are interested.

Kansas City, Mo.—Hall.—The Commercial Club committee on the proposed convention hall proposes a \$100,000 structure.

Kansas City, Mo.—F. J. Baird will expend \$1500 in repairing an office building.

Kansas City, Mo.—Postoffice and Courthouse.—Sealed proposals will be received until December 28 for the United States postoffice and courthouse building at Kansas City. Address Charles E. Kemper, acting supervising architect, Washington, D. C. (See ad. in MANUFACTURERS' RECORD of December 7.)

Kansas City, Mo.—Business Building.—A business house six stories high, forty-eight feet front by 112 deep, will be built after January 1 by F. H. Kump. Frederick E. Hill is the architect. The cost will be \$50,000. The house will be built of brick and terra-cotta, with the two lower stories of iron and glass, etc.

Knoxville, Tenn.—Church.—The Grand Avenue Mission will erect a church.

Knoxville, Tenn.—Business Block.—F. J. Callan is having plans prepared for a new three and four-story store and brick business block.

Ledroit Park (P. O. Washington), D. C.—Dwelling.—A. Goenner, 600 F street, has prepared plans for a \$10,000 residence.

Louisville, Ky.—Office Building.—The German-American Title Co. is reported as to erect an office building.

Louisville, Ky.—Dwellings, etc.—E. H. Ferguson will build three story residence to cost \$12,000; plans by Clarke & Loomis.

New Orleans, La.—Dwellings.—George Denegre will build \$15,000 residence; plans by Thomas Sully Co. W. H. Atkinson will build \$12,000 residence; plans by Thomas Sully Co. J. Buckley will build \$7,100 resi; contract awarded. Patrick Hayes will build \$4,000 cottage; plans ready. David A. Hacheney will build \$7,000 residence; plans ready.

New Orleans, La.—Depot.—John Glynn has obtained permit to erect a depot and office building.

New Orleans, La.—Residence.—Plans for a \$20,000 residence for John E. Hobson were prepared by Geo. F. Barber & Co., of Knoxville, Tenn.

Orange, Texas—Church.—The members of the Christian congregation, recently organized, are preparing to build a church.

Petersburg, Va.—Building.—The Y. M. C. A. has made arrangements to borrow \$20,000 to complete its new building.

Raleigh, N. C.—Parsonage.—The Edenton-Street Church will erect a parsonage. Address R. S. Pullen.

Salisbury, Md.—Hotel.—Thos. M. Funnell has awarded contract for erection of a hotel.

Savannah, Ga.—Bank Building.—The Citizens' Bank has let contract to M. T. Lewman & Co., of Louisville, for the erection of its new \$60,000 building.

St. Louis, Mo.—Residence.—The Valley National Realty Co. will build a \$30,000 residence.

St. Louis, Mo.—Dwellings, etc.—Building permits have been issued to J. T. Drummond for the erection of a factory to cost \$81,000; Valley National Realty Co., dwelling to cost \$40,000; A. C. Bernays, three dwellings to cost \$12,000; Luke McLaughlin, store and nine adjoining flats to cost \$7,000; Anton Elleb-echt, three adjoining flats to cost \$6800; A. J. Naughton, two adjoining flats to cost \$6000; W. E. Peckmann, a dwelling to cost \$6000.

St. Louis, Mo.—Dwellings, Stores, etc.—C. W. Kellogg & Son have prepared plans for four stores and flats for Philip Chew to cost \$25,000, and for a three-story residence for Ira J. Hedrick to cost \$6000. M. T. O. Allardt has prepared plans for a \$5000 residence for M. A. Moran and a \$4500 flats building for W. P. Sharkey. H. Vickery has prepared plans for \$7000 dwelling for E. Vickery. W. Beckman will erect a \$6000 residence; plans prepared. Wm. F. Bell will erect two dwellings to cost \$10,000; plans prepared.

A. M. Baker has prepared plans for flats and stores for Dr. Parsons to cost \$18,000. J. L. D. McCarthy has prepared plans for a \$10,000 dwelling.

St. Louis, Mo.—Dwellings.—Wm. Anderson will build a \$20,000 dwelling; plans ready. J. M. Cornwell will build a row of flats to cost \$18,000. C. R. H. Davis will build two houses to cost \$16,000. Ed. Turmes, of East St. Louis, Ill., will erect a large business structure.

Thibodaux, La.—Bank Building.—Plans for the Bank of Thibodaux's new building were prepared by Geo. F. Barber & Co., of Knoxville, Tenn.

Washington, D. C.—Dwellings, etc.—E. D. Farnham has contract to erect two four-story dwellings, steam and hot water heat, electric fixtures, etc., to cost \$5000; A. B. Morgan has prepared plans. A. B. Morgan has prepared plans for ten three-story dwellings to cost \$50,000. The District Commissioners will build a hospital. Robt. Head has plans for three three-story dwellings, furnace heat, electric fixtures, etc., to cost \$17,000. E. J. Newton has let contract for a brick store to cost \$7000; W. P. Hazen for four dwellings to cost \$16,000; S. M. Burgess for three-story dwelling to cost \$11,000; Charles Baum for three-story store and flats to cost \$11,000; John F. Burge for dwelling to cost \$4000; John S. Larcomb for dwelling to cost \$7500; S. M. Burgess for three-story, 20x52 feet, dwelling to cost \$10,000 and L. Chappel for three-story brick store and dwelling to cost \$5000.

Washington, D. C.—Store and Flats.—Charles Baum will erect a three-story brick store and flat building at a cost of \$11,000.

Washington, D. C.—University.—Final arrangements are making for the beginning of construction of the American University to be erected under the supervision of the Methodist Church. The endowment now amounts to over \$700,000.

Wheeling, W. Va.—Hospital.—Dr. Thomas M. Haskins will erect a hospital equipped with all modern improvements. The building will be a three-story one, 48x120 feet. Jos. Leiner will prepare the plans.

Washington, D. C.—Dwellings.—Building permits have been issued to Nathaniel Herschler, to build a two-story frame dwelling to cost \$4000; Dr. W. P. C. Hazen, to build four two-story brick dwellings at a cost of \$16,000; the Columbia Railway Co., to build a two-story brick office and car shed at Rosedale at a cost of \$50,000; L. Chappel, to build a three-story brick store and dwelling at a cost of \$5000.

Wheeling, W. Va.—Business Building.—W. H. Chapman will erect a five-story modern business building. Franzheim, Giesey & Farris are preparing plans.

Wheeling, W. Va.—Charles Loeffler is having plans prepared for a new six-story brick business block.

RAILROAD CONSTRUCTION.

Railroads.

Atlanta, Ga.—It is reported that a syndicate of New Yorkers will secure control of the Georgia Midland & Gulf road, for which a receiver has just been appointed, and extend it to Atlanta and Jacksonville. The Central Trust Co. of New York is trustee for the bonds. G. W. Parrott, of Atlanta, is interested.

Avon Park, Fla.—The MANUFACTURERS' RECORD is informed by J. C. Burleigh that he will build ten miles of wooden tramroad for use of Shay locomotives and cars. This line may be extended further in a few months.

Augusta, Ga.—Senator Harris has introduced a bill in the Georgia legislature authorizing the South Carolina Railway Co. to build a road from Charleston into Augusta. [This probably means an extension of its own line, now completed, further into the city.—Ed.]

Birmingham, Ala.—C. A. Avery, of the Columbian Equipment Co., advises the MANUFACTURERS' RECORD that the company expects to close a contract for the purchase of the East & West Railroad of Alabama at an early date, and that when purchased the road will be extended from Pell City to Birmingham as soon as possible. The Columbian Equipment Co. is at 66 Broadway, New York.

Brownsville, Texas.—W. H. Brooker, of San Antonio; J. P. Nottingham and G. W. Gibson are negotiating with citizens for a bonus to construct a railroad to connect the city with the nearest trunk line.

Charleston, S. C.—It is reported that the Louisville & Nashville will build an independent line from Charleston to Augusta, and will secure a charter for that purpose.

Crisfield, Md.—The MANUFACTURERS' RECORD is informed by Thomas S. Hodson, a stockholder, that work will soon begin on the road from Crisfield to Pocomoke sound. The New York Standard Construction Co., of 77 Nassau street, will build the line, which is to be part of a system twenty miles long in all. It is to be operated by gasoline motors.

Dahlonaga, Ga.—A mining company offers to build a line from Dahlonaga to Lula if the residents of these places will give a bonus of \$50,000.

Darien, Ga.—It is expected that the Darien & Western, now being constructed, will be completed in three months. Frank M. Baker is general manager.

Fayetteville, W. Va.—The Sugar Creek, Park's Branch & Paint Creek Railroad Co. has been chartered with \$200,000 capital to build a road from the Dunlop branch of the Chesapeake & Ohio system up Sugar Creek valley to the mouth of Paint creek, in Kanawha county.

Fort Smith, Ark.—Operations have begun on the proposed Fort Smith, Paris & Dardanelle road, which, it is stated, is to be connected with the Choctaw, Oklahoma & Gulf road, now being built. The Fort Smith line will extend eastwardly about eighty miles. Messrs. Stevenson or Patterson may be addressed. T. Hurley is contractor for part of the work.

Galveston, Texas.—It is stated that New York parties have become interested in the Galveston & Western, and will extend it to Houston. The extension will be twenty five miles long. Walter Gresham is president.

Kennett, Mo.—Louis Houck, of Cape Girardeau, Mo., is building a road twenty-four miles long from Kennett to Caruthersville, in Pemiscot county. It is expected to complete the road by January 1.

Little Rock, Ark.—Gov. W. M. Fishback is president of the Little Rock & Pacific Railroad Co., chartered to build through Pulaski, Tell, Logan and Sebastian counties in Arkansas to connect with the Choctaw, Oklahoma & Gulf line at Wister Junction. The capital is \$4,600,000 and the total mileage 230. D. G. Fones is vice-president.

Louisville, Ky.—It is stated that a surveying corps of the Cleveland, Cincinnati, Chicago & St. Louis is surveying a route from Watson, Ind., to the Indiana terminus of the Kentucky and Indiana bridge now being completed over the Ohio river. This line would give the Cleveland, Cincinnati, Chicago & St. Louis an entrance into Louisville.

Mobile, Ala.—Several hundred feet of elevated track will be built by the Mobile Coal Co. for hauling cars to coal chutes. A series of chutes will also be built of a capacity of 2000 tons daily. Address President Danner.

Mobile, Ala.—It is stated that another English syndicate has been formed which is willing to take bonds of the proposed Mobile, Jackson & Kansas City line, promoted by Hon. H. Austill and others.

Mooresville, N. C.—The MANUFACTURERS' RECORD is advised that the Southern Railway Co. is seriously contemplating the construction of a line from Mocksville to Mooresville to connect with the Western North Carolina.

Mountain Lake, Va.—The railroad to be built by S. S. Chisolm and associates is to haul timber and lumber to the line of the Norfolk & Western for shipment. Work has begun on the road.

New Orleans, La.—The Louisville & Nashville will rebalast its New Orleans & Mobile division with rock. The work will require about two years. Limestone from the Alabama quarries will be used. Charles Marshall is superintendent.

Natchitoches, La.—Bertrand Beer, of New Orleans, one of the syndicate which recently purchased the Natchitoches & Red River Valley Railroad, writes the MANUFACTURERS' RECORD that the idea of extending the line to Shreveport is being considered.

Palestine, Texas.—G. W. Burkitt, of the Palestine & Dallas Railroad, informs the MANUFACTURERS' RECORD that arrangements have been made to begin construction work in the spring of 1895.

Paragould, Ark.—The Paragould Southeastern Railroad is nearly completed to Cardwell, thirteen miles distant, which is to be the present terminus. It is expected that trains will be running into Paragould by December 1. J. C. Hasty, of Paragould, is interested.

Roanoke, Va.—The railroad to be built by A. J. Banks, of Roanoke, from the Mountain Lake syndicate's property is to be called the Big Stone Creek Railroad. It will be three miles long.

South McAlester, I. T.—Work has commenced on the extension of the Choctaw, Oklahoma & Gulf road. A dispatch states that 1000 men are on the ground. George S. Good & Co., of Lock Haven, Pa., are the contractors.

Tyler, Texas.—President H. H. Rowland, of the Tyler Southeastern Railway, informs the MANUFACTURERS' RECORD that he has advised the directors to make this line standard gage. The project will be considered at the annual meeting in May, 1895. This road is eighty-eight miles long, and extends from Tyler to Lufkin, Texas. It forms a part of the St. Louis Southwestern system.

Valdosta, Ga.—The Valdosta Southern will issue \$120,000 in bonds to complete and equip its line, now under construction from Valdosta to Madison, Fla. About eight miles have been completed.

Waycross, Ga.—The Savannah Canal Co. is building a 12-mile line from Falkston to Camp Cornelia. [This is the company which is drain-

ing Okefnokee swamp by excavating a canal. Henry Jackson, of Atlanta, is president.—Ed.]

Wharton, Texas.—The San Antonio & Gulf Shore Company has issued bonds to the amount of \$12,000 per mile to pay for its extension. The bond issue is secured by the Farmers' Loan & Trust Co. of New York, and is a lien on the completed portion of the road. William Davis, of San Antonio, is president.

Wichita Falls, Texas.—It is stated that final arrangements have been made for building the proposed road from Wichita Falls to Henrietta at once. J. A. Kemp is president of the company.

Electric Railways.

Alexandria, Va.—The Washington, Alexandria & Mount Vernon Electric Co. has extended its road about two miles towards Washington. It is understood further work in this direction will begin in a few days.

Baltimore, Md.—The Mount Washington Electric Railway Co. is to have \$150,000 capital. George R. and William G. Hatter are among the incorporators.

Baltimore, Md.—Work has begun on the construction of the Baltimore, Middle River & Sparrows Point electric line. Charles B. McLane is chief engineer.

Jacksonville, Fla.—It is expected to complete the Bay street branch of the Jacksonville electric railway in about one month.

New Orleans, La.—W. N. Louque, president of the Jefferson Avenue Railway Co., authorizes the MANUFACTURERS' RECORD to state that the company will build its line as soon as right of way is secured. It will be a double-track electric road ten miles long. Mr. Louque's address is 845 Canal street.

Norfolk, Va.—It is reported that ground is about to be broken for the electric line to Lambert's Point, which has already been surveyed.

Pikesville, Md.—The Pikesville, Reisterstown & Emory Grove electric road is to be completed by January 1. Four miles of track are now completed.

Portsmouth, Va.—Two companies have applied to the city council for franchises to build electric roads in the city.

Sedalia, Mo.—D. C. Mesker, W. E. Sterne and others have incorporated the Sedalia & Brown Springs Electric Co. to build a line between the points mentioned.

St. Louis, Mo.—J. E. Young and others, of Chicago, are interested in the Midsuburban Railway Co., which intends building an electric road from Maplewood Park to connect with the Lindell Railway Co.'s system.

New Steamship.

New York.—H. B. Plant, of the Plant Steamship Co., writes to the MANUFACTURERS' RECORD that the company is considering the construction of a new steamship for ocean service, and may build more than one. No contracts have been let as yet. The address is 12 West 23d street.

Canal.

Winter Haven, Fla.—Plans have been prepared for the canal which it is proposed to excavate to connect several lakes near Winterset by a navigable channel. F. W. Inman, of Winter Haven, will receive bids from contractors.

MACHINERY WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Barrel Machinery.—The Bunch & Yates Co., Memphis, Tenn., wants prices on slack-barrel machinery.

Belting.—W. A. Price, Carpenter, Miss., wants 200 to 250 feet of belting.

Boiler.—Jno. F. Horr & Co., Key West, Fla., need a twenty horse-power boiler.

Boiler.—The Bridgeport Cistern Co., Bridgeport, Fla., wants a fifty horse-power boiler, new or second-hand. Write at once.

Boiler and Engine.—C. W. Wilmeroth, 5 and 7 Dearborn street, Chicago, Ill., wants prices on 200 horse power boiler and engine delivered at Natchez, Miss., by boat or rail.

Boiler and Engine.—Curtin & Butt, Alexandria, Va., want prices at once on a twenty-five to forty horse-power boiler and engine, new or second-hand.

Boilers and Engine.—The Smith Mining Co.,

Hillman, Ala., is in the market for a seventy-five horse-power side valve engine and two eighty horse-power boilers.

Bottling Machine.—The Swannanoa Ice & Coal Co., Biltmore, N. C., will buy a bottling machine.

Brick Machinery.—The Owensboro Brick & Sewer Pipe Co., Owensboro, Ky., want prices on brick and tile machinery.

Broom Machinery.—Chas. W. Jacob, 63 Pine street, New York, wants machinery (for export) for making brooms and brushes from the piassava fibre.

Brush Machinery.—Rennous, Kleinle & Co., Baltimore, Md., want bristle-mixing and dragging machines.

Canning Supplies.—Jno. F. Horr & Co., Key West, Fla., want a process kettle.

Coal-mining Machinery.—See "miscellaneous machinery."

Cold-storage Supplies.—The Valdosta Ice Co., Valdosta, Ga., wants pans for cold storage.

Compressor.—The Smith Mining Co., Hillman, Ala., is in the market for a compressor.

Corn Crusher, etc.—H. J. Horn & Son, Sharon, Md., are in the market for a 20 inch French burr mill and corn crusher.

Cotton Machinery.—J. K. Morse, Viola, Texas, wants to buy two looms, spinning jack and cotton carder.

Drilling Contract.—H. H. Palmer, 82 South Highland avenue, Long Island, N. Y., wants to contract for drilling of wells seventy-five to 100 feet deep, one-and-one quarter-inch core, in the vicinity of Chattanooga, Tenn.

Dynamo.—C. W. Wilmeroth, 5 and 7 Dearborn street, Chicago, Ill., wants prices on a dynamo, medium size, for lighting factory.

Edger.—W. R. Gardy, Oak Grove, Va., wants prices on a second hand edger.

Electric-light Plant.—C. W. Miller, Van Buren, Ark., wants prices on electric-light plant for city of 4000 inhabitants.

Electric Motors.—The Fairbanks Co., 604 Canal street, New Orleans, La., is in the market for two electric reversible motors.

Elevators.—J. B. Stewart, Huntington, W. Va., wants figures on two freight elevators.

Embossing Press.—Wanted, a power embossing press, such as are used in binderies; Fred Bergner & Co., 308 West Pratt street, Baltimore, Md.

Foundry Equipment.—A cupola and foundry equipments will be needed. Address P. W. Lowmes, South Milwaukee, Wis.

Foundry Machinery and Tools.—Curtin & Butt, Alexandria, Va., want prices on lathe to swing sixteen to eighteen inches, sixteen to twenty feet long; drills for light casting, etc., new or second-hand.

Furnace.—M. J. Hart, 34 Perdido street, New Orleans, La., wants to contract for the construction of a furnace that will melt old tin cans, so that the solder and tin can be used again.

Gas Stoves, etc.—The Fairbanks Co., 604 Canal street, New Orleans, La., wants a general line of gas stoves for heating, cooking, etc., and combination gas fixtures.

Handle Machinery.—The Bunch & Yates Co., Memphis, Tenn., is in the market for handle machinery.

Heating Plant.—J. B. Stewart, Huntington, W. Va., wants figures on steam heat for a seven-story 40x140 foot building. Plans now ready.

Hoisting Engine.—The Smith Mining Co., Hillman, Ala., is in the market for a hoisting engine.

Ice Plant.—The Hinton Electric Light Co., Hinton, W. Va., wants a seven ton ice plant complete.

Lard Machinery.—See "packing machinery."

Locomotive.—Hinton & Thompson, Addison, Miss., want prices on a good second hand logging engine (Shay preferred)

Marine-railway Supplies.—The Brunswick Foundry, Machine & Manufacturing Co., Brunswick, Ga., will buy engines, chains, gearing, etc., for marine railway.

Miscellaneous Machinery and Supplies.—The Pan-American Investment Co., Room 8, Sun Building, Washington, D. C., is in the market for new or second-hand coal and oil mining machinery, steamers, railroad and log-road supplies, portable houses, oil-pipe line and tanks, oil-well machinery, oil refinery, etc., for shipment to Columbia, South America.

Oil-mill Machinery.—See "miscellaneous machinery."

Oil-well Machinery.—See "miscellaneous machinery."

Packing Machinery, etc.—The Valdosta Ice Co., Valdosta, Ga., wants prices on pork-packing, lard and sausage machinery.

Pipe.—See "miscellaneous machinery."

Pipe.—C. W. Wilmeroth, 5 and 7 Dearborn street, Chicago, Ill., wants prices on corrugated iron steam pipe.

Planer.—W. A. Price, Carpenter, Miss., wants a planer.

Portable Houses.—See "miscellaneous machinery."

Quarry Drills.—Swift & Ethridge, Elberton, Ga.,

want to buy a Ledge plug steam drill and a No. 3 drill for granite quarry.

Railroad Supplies.—See "miscellaneous machinery."

Rails.—Hinton & Thompson, Addison, Miss., want prices on two or three miles of iron rails, twelve to eighteen tons.

Rivets and Burrs.—T. H. Hand, Talladega, Ala., wants to correspond with dealers in and manufacturers of rivets, with burrs.

Rolling Stock.—The Missouri, Kansas & Texas is building 200 freight cars, and it is stated, will purchase several hundred more. Address Vice-President Purdy, Parsons, Kans.

Roofing.—W. A. Price, Carpenter, Miss., wants fifteen to eighteen squares of roofing.

Sausage Machinery.—See "packing machinery."

Saw.—The Gainesville Iron Works, Gainesville, Ga., wants band saws for pattern shop; second-hand will do.

Saws.—W. A. Price, Carpenter, Miss., wants two cut-off saws.

Saw Mill.—H. J. Horn & Son, Sharon, Md., are in the market for a left-hand saw mill, new or second-hand.

Saw Mill.—W. R. Gardy, Oak Grove, Va., wants prices on band saw mill of 20,000 feet daily capacity.

Shafting, etc.—Curtin & Butt, Alexandria, Va., want forty feet of shafting and four hangers.

Shingle Machine.—D. E. Llewellyn, Glen Jean, W. Va., is in the market for a hand-power (lever) shingle machine of 6000 capacity daily.

Starch Machinery.—George Everette, Trenton, Tenn., wants to communicate with manufacturers of machinery for starch-making.

Steamboats.—See "miscellaneous machinery."

Tanks.—See "miscellaneous machinery."

Telephone Equipment.—C. M. Camp, Box 11, Bryan, Texas, wants prices on telephones of not less than sixty nor more than one hundred for an exchange.

Telephone Equipment.—J. E. Hellams & Co., Waynesville, N. C., will want about 4000 pounds No. 12 galvanized wire, 4000 pounds No. 14 galvanized wire, fifty or seventy-five telephones, central-office outfit for seventy-five to one hundred telephones, etc.

Well-drilling Machinery.—G. M. Kirby and J. R. Sullivan, Sanger, Texas, are a committee appointed to buy artesian well outfit.

Wind-mills.—H. M. Lipe, Mint Hill, N. C., wants wind-mills.

Wood-alcohol Plant.—S. P. Ravenel, Jr., Highlands, N. C., wants to buy a wood alcohol plant.

Woodworking Machinery.—Reschel, Kemp & Co., Alexandria, Va., will need shapers, molders, band saw, etc.

ARTESIAN well-boring is a specialty in which the firm of Sydnor & Shepard, of Richmond, Va., have met with much success. They have just finished drilling two wells for Major Lewis Ginter, near Richmond. One is 470 feet and the other 357 feet deep through granite, and a flow of 200 gallons of water per minute is secured. The pumping is done by compressed air, and the air compressor is one mile from each well. They are also drilling for Mr. Ginter two other wells, which will be operated by the same air system. One of them will be one and a half miles from the pump. This pump is a remarkable device. Air is forced down the small pipe; coming up in a cone shape, it fills the well pipe and carries the water up with its force. It also lightens the water column, and causes the water to flow more rapidly. The pump is suitable for use in wells of any depth, and any number of wells can be operated from one engine at any distance apart.

Increased and Improved Service to New York via Pennsylvania Railroad.

On Sunday, November 18, the Pennsylvania Railroad placed in service between Baltimore and New York a new train, with parlor car and coaches, leaving Union Station daily at 7.43 P. M., due at Philadelphia 9.54 P. M., New York 12.33 midnight. Also between Baltimore and Washington a new train daily, with parlor car and coaches, leaving Union Station 8.37 P. M. The New York limited formerly leaving Baltimore 10.45 A. M., now leaves Union Station 11.05 A. M., with dining car, parlor car and coaches, reaching Philadelphia 1.15 P. M., New York 3.43 P. M. A slight change was also made in two other New York trains, which are now scheduled to leave Union Station 8.08 and 9.05 A. M. daily. Other express trains to Philadelphia and New York leave Union Station as formerly, viz., 12.53, 8.23, 8.50 and 10.08 A. M., 12.05 (dining car), 1.20, 3.10, 4.20, 4.57 (dining car), 5.27 and 11.35 P. M. A new train has also been added, with dining, parlor and day coaches, New York to Baltimore, leaving 3.20 P. M., arriving Baltimore 8.34 P. M.

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Saturday and Sunday Excursion to Washington.

The Pennsylvania Railroad Co., on Saturday and Sunday, December 1 and 2, will place on sale at ticket offices in Baltimore, excursion tickets to Washington, good on all regular trains in either direction, good to return until Monday, December 3, at the low rate of \$1.25 for the round trip.

THE water route of the Norwich Line between Boston and New York is entirely within Long Island Sound, thus avoiding the rough water and seasickness incidental to "outside" lines. The dining-saloon on these steamers is on the upper deck, insuring plenty of light and air. The state-rooms are \$1.00 and \$2.00, according to size and location, and accommodate two or more persons. Always ask for tickets via this line at all the principal ticket offices in Philadelphia, Washington, Baltimore, Harrisburg and all points South and West. Passengers for Boston and the East can avoid the inconvenience of carriage transportation in New York, as steamers leave the pier adjoining Pennsylvania Railroad Ferry, foot Desbrosses street.

FOR "CLASSIFIED INDEX" SEE PAGES 3, 5 AND 7.

* Not in this issue.